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The purpose of this dissertation was to present a methodological analysis of the demographic, socioeconomic and structural components of small and medium towns to highlight their significance and integration into the urban policy framework. This dissertation was based on descriptive-analytical study on the demographic growth, social and economic characteristics, provision of urban infrastructure and services, municipal finance, urban governance and policy framework of the towns. The main premise of this study was to shift the focus of urban studies researchers from the epistemologies of the developmental discourse of large cities, urban agglomerations, metropolitan regions and megacities towards ordinary towns which have the potential to develop and grow but are considered as provincial and weak. Therefore, this study attempted to search for an advanced agenda on the research on small and medium towns by focusing on four critical areas; (i) small and medium towns' economic and service functions, (ii) coverage of infrastructure and municipal service performance levels, (iii) municipal finances and functions performed, and (iv) measuring the capacities of small and medium towns to stimulate urban development. The study was conducted in the eight towns (Sihora, Panagar, Katangi, Patan, Shahpura, Majholi, Barela and Bhedaghat) of Jabalpur district in the state of Madhya Pradesh in India. The data for the study was collected by way of semi-structured interviews and secondary sources. The semi-structured interviews included the information related to the governance pattern of the urban local bodies of the towns. The information on demographic and socioeconomic indicators was extracted from the Primary Census Abstract and District Census Handbook, Jabalpur district, Madhya Pradesh (2011) which was available at Census of India office based in New Delhi. The collected datasets were analyzed by applying the quantitative techniques such as rank-size rule, centrality indexes based on the area and population served by a settlement, location quotient for occupational pattern, functional or activity mapping versus

financial structure of the urban local bodies and SWOT (strength, weakness, opportunities and threats) analysis.

The findings from the study indicated that the towns are transitional areas between the urban and rural and holds significance in terms of highlighting bottom – up planning by taking the rurban clusters and agropolitan development approaches to develop and strengthen the socioeconomic and urban functions basis of towns. It can also be argued from the findings on governance, functional responsibilities and the status of the finances of the urban local bodies that the decentralization mandate of the Government of India was introduced to fulfill the gaps in urban governance that existed previously under a centralized management with little autonomy of the urban local bodies. However, the towns are still possessed with political, institutional, technical and economic challenges and there is a need to build everything from scratch which means taking on new administrations processes. Lastly, it was found that the strengths and weaknesses of the towns could be prioritized based upon short – term action plans for the development towns. This might be also useful in fulfilling the purpose to provide a general direction for the integration of towns in the present urban development discourse of India as well as the state of Madhya Pradesh. Based upon the empirical evidences of this study, it can be said that this dissertation makes a significant contribution in understanding the complex relationship between urbanization, development and economic growth. This study also indirectly implies that there is a need to reexamine the classification of urban areas in India. The urbanization pattern in India is mainly characterized by a few highly populated large cities and a large number of small and medium towns. At present, 70 percent of the urban population resides in 468 Class I cities and the remaining 30 percent is distributed in 5,705 towns in India. The definition of urban areas in India has been rigid since 1961. The oversimplification of the classification of urban areas can be seen as a major criticism in the definition of urban area in India. As such, the designation of a settlement as “urban” upon acquiring a minimum threshold of 5,000 people is only a statistical measure that is simply adding the number of towns in the overall urban growth. The lower order urban settlements remained classified as urban with little attention paid on their jurisdictional,

organizational and administrative components. Although, this study presents an array of issues associated with the social and economic development of towns still, an impetus for subsequent rigorous, social scientific investigation into the emerging towns and their relevant issues is required in India.

TOWNS IN URBAN DEVELOPMENT: A CASE STUDY OF THEIR DEMOGRAPHIC, SOCIOECONOMIC AND STRUCTURAL IMPORTANCE

by

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CHAPTER I

INTRODUCTION

1.1 Research Background

The management and planning for cities and towns is an essential feature to maximize the benefits of urbanization and promote sustainable development of urban areas (UN-HABITAT, 2016). It is projected that by the year 2030, more than fifty percent of the world's urban population will be living in small sized urban centers as compared to the large cities and urban agglomerations. Moreover, the global urban pattern shows that Latin America (Mexico, Brazil and Chile), China, India and Africa have the largest share of urban settlements of all sizes. It is estimated that the scale of urbanization will be immense and urban areas of these countries will be contributing 60 – 70 percent of gross domestic product into the above mentioned countries' economies by the year 2030. However, the smaller urban centers in the above mentioned countries are facing the challenges of urbanization. These urban areas are struggling to provide basic services, there is policy gridlock which makes it difficult to meet the growing demands of the urban dwellers, and urban local bodies are incapable of managing their own – tax revenue bases to increase the spending on development activities (Mckinsey Global Institute, 2009; 2010; 2011 and 2016). Therefore, it is important to ensure that the present and aspiring smaller urban centers are developed in an equitable, inclusive and sustainable way (Glaeser and Ghani, 2015). An overview of the urbanization pattern around the world to the present implies that the smaller urban centers have been the focus of the international development agencies in order to achieve a balanced urban and rural development (WDR 1978, 1980, 1985, 1991, UNCHS 1986, UN – HABITAT II 1996 and UN – HABITAT III 2016). While cities became economic growth centers, challenges of over population, lack of planning, and lack of infrastructure coverage, proliferation

of slums, urban poverty and social illnesses also arose. Perhaps, an important question that raised the concerns among the policy makers was how to control the growing pressure on the overall urban growth? (Glaeser and Ghani, 2015).

This main question highlighted the smaller urban center's role and significance in the settlement system. Various scholars postulated the role of smaller center as developmental nodes between cities and rural areas. They addressed the significance of smaller urban centers by focusing on their economic role, growth patterns, impact on the development of rural areas, functioning as service centers and their role in controlling the rural migration (Rondinelli, 1983; Mathur, 1984; Satterthwaite, 2016; Tacoli, 1998, 2004 & 2006; Hinderink and Titus, 1988, World Bank, 2009; UN – HABITAT, 2016). The most widely studied perspective on the role of smaller urban settlements in regional development was described by Rondinelli (1985). According to him smaller urban settlements mainly acted as centers of demand and markets for agricultural produce from their surrounding rural region, centers for production and distribution of goods and services to their rural region, centers for growth and consolidation of non – farm activities and employment and attracting rural migrants. Rondinelli and Ruddle (1983) observed that smaller urban centers play a key role in redistributing urban population and reducing polarization in the settlement patterns and that they could facilitate development of rural regions, which will spread the benefits of urbanization equitably.

However, empirical evidence also showed that smaller urban centers have a weaker role in absorbing population due to poor quality and quantity of social and physical infrastructure, lack of economic opportunities, weak finances that do not serve the economy and low interest of the private and public investors in the investment of the urban local bodies of smaller urban centers (Unsal, 2004; Njoh, 2006; Owusu, 2008; Yeh, 2015; Cox and Longlands, 2016 and Satterwaite, 2016). Smaller urban settlements have been mainly studied with a strong focus on their role in overall economic and regional development. However, an in-depth analysis based on the demographic growth, social and economic characteristics, provision of urban infrastructure and

services, municipal finance, urban governance and policy framework has not yet been performed (Sharma, 2012). In addition to this, to bring a balance and remove the unevenness across the urban geographic space from cities to smaller urban centers, it is essential to explore spatially targeted intervention strategies in the existing infrastructure, institutions and socioeconomic capacities of the smaller urban areas (Brenner and Schmid, 2015).

1.2 Research Objectives, Scope and Limitations

The main purpose of my dissertation is *to present a methodological analysis of the demographic, socioeconomic and structural components of small and medium towns to highlight their significance in the urban settlement system and integration into the urban policy framework*. This dissertation is an attempt to shift the focus of urban studies researchers from the epistemologies of the developmental discourse of large cities, urban agglomerations, metropolitan regions and megacities towards ordinary towns which have the potential to develop and grow but are considered as provincial and weak (Roy, 2011 and Sharma, 2012). In this research, I seek to understand the local economic and social geographies of towns which so far remain obscured from the urban research agenda. Research on small and medium towns has largely only addressed specific issues such as income inequality, housing, tourism, cultural regeneration, small neighborhoods and communities. Still, the overall approach of these studies remains fragmented and has not coalesced into critical work highlighting the importance of towns in the urban studies research (Rondinelli, 1983; Satterwaite, 1986; Parnell 2014; Wirth et.al, 2016 and Noronha and Vaz, 2015). Therefore, this study attempts to search for an advanced agenda on the research on small and medium towns by focusing on four critical areas; (i) small and medium towns' economic and service functions, (ii) coverage of infrastructure and municipal service performance levels, (iii) municipal finances and functions performed, and (iv) measuring the capacities of small and medium towns to stimulate urban development. The research questions which arises based on these critical areas are as follows:

- How does the spatial development planning and strategies support integrating small and medium towns into economic and spatial planning framework?
- Why do planning, governance and finance matter for the development of small and medium towns and how they are interlinked and mutually reinforcing the urban local bodies of small and medium towns?
- What are the peculiarities that small and medium towns hold and how can they be intervened into the overall urban development strategies?

Based on the four critical areas and the research questions, the broad objectives of this study are; (i) to understand the overall importance of towns in the urban settlement system, (ii) to assess the demographic importance of towns based on the theories of rank – size rule, primate city and central place, (iii) to examine the urban functions or services present in the towns in relation to the surrounding settlements, (iv) to assess the extent and role of local bodies institutions in the provision of basic urban services in the towns, (v) to examine the existing municipal finances in meeting the challenges and development of towns, (vi) to rank towns based on the five dimensions on urban growth, economic development, physical infrastructure, human assets and social infrastructure and highlight the challenges and opportunities present in the towns and (vii) to provide a suggestive framework for enhancing the potentials and development of towns to integrate them in the urban policy development.

The scope of this study includes the analysis of population growth pattern, settlement system, urban functions (such as educational facilities, health facilities, banking, recreational facilities, hostels, old – age homes and market facilities), local institutions, governance structure and framework and municipal finances of the small and medium towns in a district. The study is focused on the city and towns of one of the fastest growing districts (Jabalpur) in the state of Madhya Pradesh in India. This study follows the Census of India nomenclature of city – size classification (Class I cities and Class II – III towns). The definition of this nomenclature is presented in the next section of this chapter. The main limitation of this study is the unavailability

of the Census of India data at the city and town level on migration and industrial workers classification. In addition, the shape files of the study were not available so a complete base map was prepared for this study.

1.3 Introduction to Study Area Jabalpur (Madhya Pradesh, India)

India has a low level of urbanization. Presently, only 32 percent of the total population is classified as “urban” in India. This rate is much lower than in other major developing countries, for example, 45 percent in China and 87 percent in Brazil (HPEC 2011). Even though the level of urbanization is comparatively slow, India is still considered as having a high urban population with the rate of urbanization being most pronounced in developing countries (Kundu 2014). An important feature in the current pattern of urbanization of India is the variation in the growth of cities and towns. As per Census 2011, there are 7,933 cities and towns in India. In this total share, the growth rate of towns has been increasing since 1961. In absolute terms, the total number of towns have increased from 3,984 in 2001 to 5,705 in 2011. However, the percentage distribution of population across different size classes showed the greatest share of population growth occurred mainly in Class I cities (refer figure 1 and table 2).

It is important here to mention that the definition and classification of “urban” in India before going to further analyses. The Census of India defines an area as “urban” if it qualifies the following criterion; a minimum population of 5,000; at least 75 percent of male working population is engaged in non – agricultural activities; a population density of at least 400 persons per square kilometer. However, based on the population sizes the Census defines urban areas as cities (having population more than 100,000), towns (having population between 5,000 – 99,999), census towns, metropolitan areas and urban agglomerations. The classification of urban areas is given in table 1 below.

A major problem in defining the urban areas in India is the arbitrariness in the definition of census towns. As a rural settlement unit fulfills the criteria of an “urban” area, it is classified as census town. Until 2001, the number and share of census towns remained relatively constant.

However, between 2001 and 2011 the increase in the number of “census towns” was remarkable, increasing from 1,362 in 2001 to 3,894 in 2011 (Kundu 2011, Karmakar 2015 and Pradhan 2012). These census towns, due to an increase in population and area, graded into the category of towns. However, the main problem is that census towns do not come under the category of statutory towns which makes the administration of these towns ambiguous. Some of the census towns are either administered by rural municipalities or absorbed into a larger city or metropolitan area (HUDCO, 2017). Census towns have now become major points for speculation among scholars in India to understand the emerging pattern of urbanization in India and the Census’s methodology of defining the urban areas (Pradhan, 2012 and Kundu, 2011).

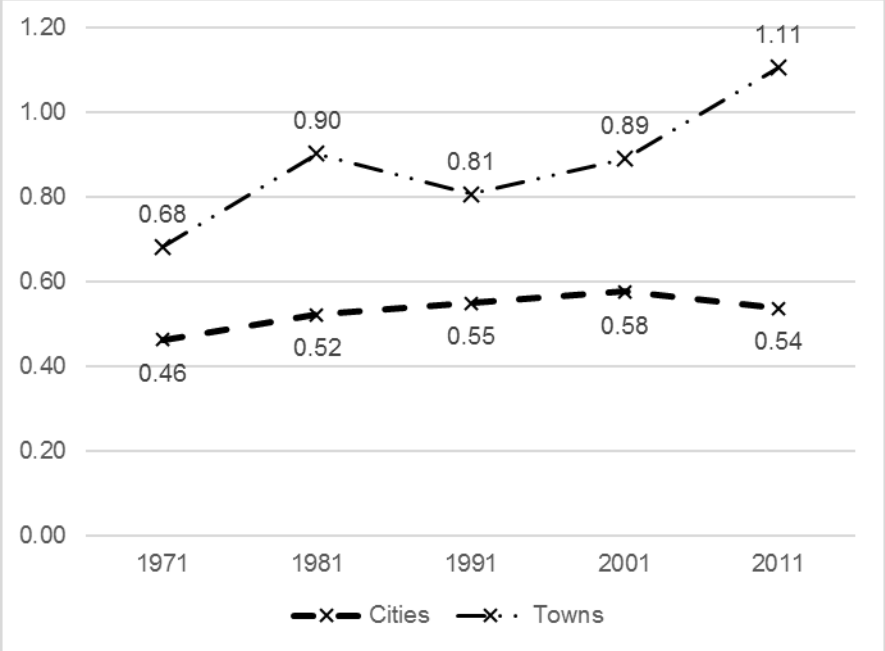
Table 1. Classification of Urban Areas in India

Urban agglomerations	Are defined as continuous urban spreads constituting a town and its adjoining urban outgrowths, or two or more physical contiguous towns and any adjoining urban outgrowths of such towns.	
Metropolitan cities	Are those which have a population of at least 10 lakhs (1 million)	
Statutory towns	All places with a municipality, corporation, cantonment board or notified town area committee.	
City – size classification (based on population size)	• Class I: 100,000 & more	Cities
	• Class II: 50,000 to 99,999 • Class III: 20,000 to 49,999	Medium towns
	• Class IV: 10,000 to 19,000 • Class V: 5,000 to 9,999 • Class VI: minimum 5,000	Small towns
Census towns	Places which meet the following criteria; a minimum population of 5,000; at least 75 percent of male working population is engaged in non	

	– agricultural activities; a population density of at least 400 persons per square kilometer.

Source: Census of India

Figure 1. Growth Rate of Cities and Towns in India



Source: Census of India

Table 2. Percentage Distribution of Population in Cities and Towns in India

Year	Cities	Towns				
	Class I	Class II	Class III	Class IV	Class V	Class VI
1961	52.58	10.90	16.26	12.37	6.95	0.93
1971	58.15	10.69	15.26	10.81	4.52	0.57
1981	62.47	10.90	13.34	9.18	3.53	0.58
1991	65.98	10.54	12.85	7.66	2.62	0.36
2001	69.94	9.50	11.76	6.41	2.16	0.23

2011	70.20	8.53	11.09	6.37	3.36	0.44

Source: HUDCO Report

It is evident from figure 1 and table 2 that it is erroneous to assume that the number of cities is growing faster than the number of towns. However, the proportion of the total urban population that lives in cities continues to increase (Karmakar, 2015). Notably, overall policymaking may be seen as indicative of a general bias towards larger urban centers, mainly due to the considerable demands on infrastructure, service delivery and governance made by large cities and metropolitan areas. In this way, small towns that get absorbed by large cities have very little control over their development (Shaw, 2012).

Cities and towns in India have been given an administrative status by the Census of India such as urban agglomeration, municipal corporation, municipality, nagar panchayat, cantonment board, municipal board, Industrial Township, notified towns area committee and many others. The Government of India introduced the decentralization reforms called as 74th constitutional amendment act (1992) for urban areas and categorized the areas as urban local bodies into three main types; Municipal Corporation, Municipality and *Nagar Panchayat.* The purpose of the decentralized reforms was to ensure better management and planning of the urban areas since the urban local bodies play a crucial role in delivery of social and economic services in the urban areas (Purohit, 2016). Despite this crucial attempt, the issues of devolution of functions, finances and functionaries remained a problem. Since cities (or municipal corporations) are the major destinations of investment and external assistance and the municipalities and nagar panchayats (small and medium towns) remained ignored and unable to utilize their legal powers in improving their towns and therefore maintained a weak administrative, institutional and financial basis (Nandi & Gamkhar 2013).

Madhya Pradesh is the central state of India, sharing its borders with the states of Uttar Pradesh, Rajasthan, Chhattisgarh, Maharashtra and Gujarat. It is a low – level urban state with

27.62 percent urban population, which is less than the average urban population of India (32 percent). However, the state experienced a steady increase in the rate of urbanization between 1971 and 2011, an increase from 18.58 percent to 27.62 percent. According to the economic survey report (2016 – 17) for the state of Madhya Pradesh, the percentage share of the industrial sector (39.06) in the gross domestic product of the state is higher than the percentage share of the agricultural sector (33.85). As mentioned in the report, there has been a strong emphasis on the industrial sector in the state mainly due to the development of industrial clusters and various schemes for the small and medium industries, tourism, minerals and information technology initiated by the Government of Madhya Pradesh. The state of Madhya Pradesh is divided into fifty districts and 14 municipal corporations, 97 municipalities, 249 nagar panchayats and 112 census towns spread across the districts in the state. The top five urbanized districts in the state are Bhopal (80.8 percent), Indore (74.1 percent), Gwalior (62.7 percent), Jabalpur (58.5 percent) and Ujjain (39.2 percent) (Primary Census Abstract, Census of India 2011).

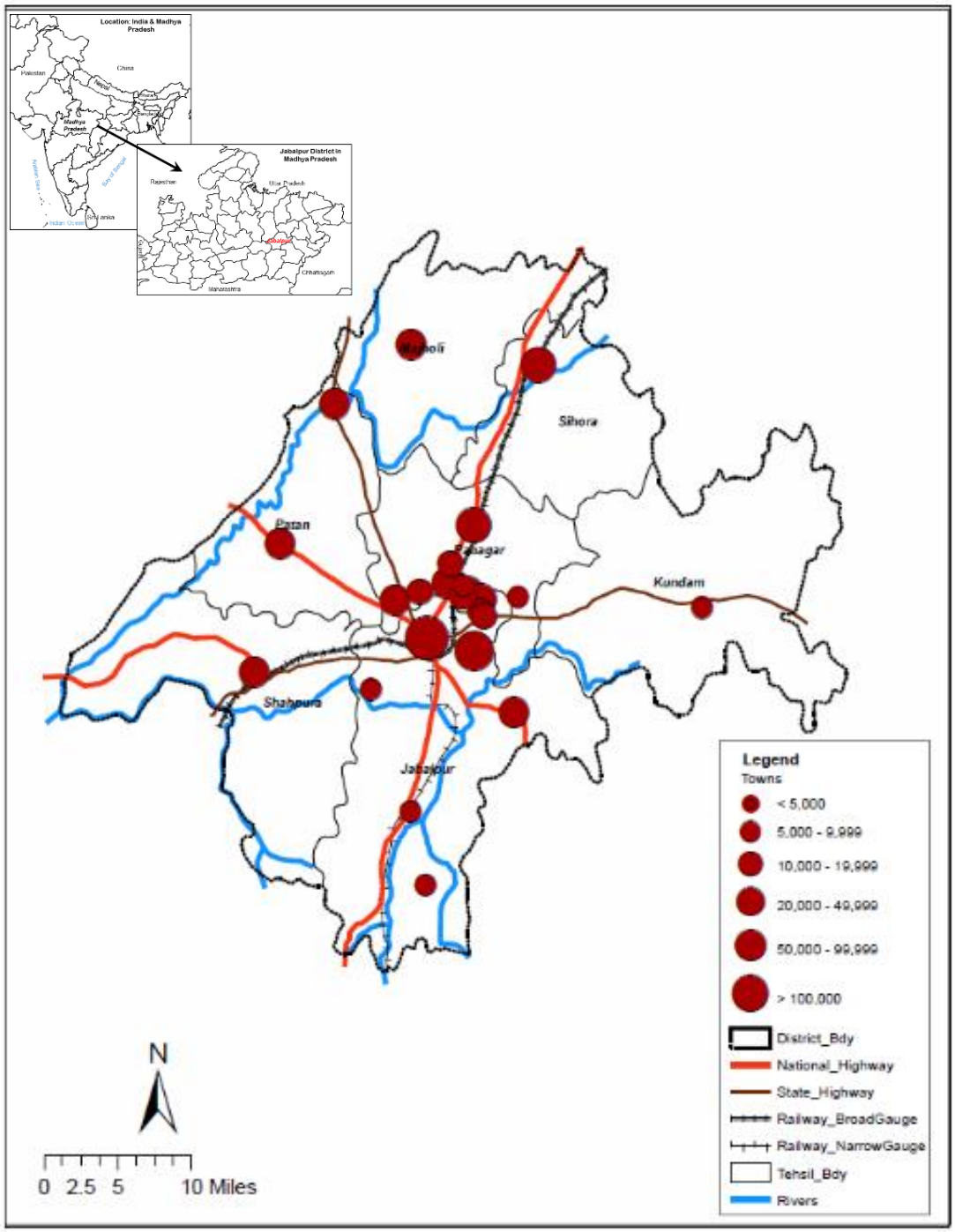
Jabalpur district holds demographic, economic and geographical significance. The district has a total geographical area of 5,198 square kilometers and a total population of 2.46 million. Out of the total population, 1.44 million is urban and 1.02 million is rural. The district is divided into seven sub – districts namely, Jabalpur, Sihora, Majholi, Patan, Shahpura, Panagar and Kundam. The urban settlement structure in the district consists of 1 municipal corporation, 2 municipalities, 6 nagar panchayats, 1 cantonment board and 14 census towns (refer map 1). Jabalpur municipal corporation is the only Class I city having more than 100,000 in the district. Therefore, the city has a large industrial, services and tertiary sector base. In the municipalities and nagar panchayats, mainly agricultural and secondary sectors activities are dominant. *Bidi* rolling (tobacco filled thin cigars), bricks, bamboo, *poha* (flattened rice) and marble-based industries are the major household industries present in the small and medium towns of the district. In addition, the small and medium towns act as *mandi* towns or weekly market towns for the surrounding rural areas.

A detailed analysis of Jabalpur Cantonment Board and census towns on the infrastructural and governance is beyond the scope of this study. This is because the cantonment board which is a statutory urban area as per the Census of India but the overall administrative structure and working of the board comes under Director General Defense Estates (Ministry of Defense) and as mentioned above, the census towns which are the newly emerged urban settlements and do not come under any constitutional status are either under the rural administration of Jabalpur district or they have been amalgamated under Jabalpur Municipal Corporation. However, an assessment of the urban functions for both the cantonment board and census towns have been included in the Chapter 2 to show their significance in the urban settlement hierarchy. A brief profile of the towns in Jabalpur district is shown in Table 3 (refer page 12).

1.4 Broader Implications of the Research

This research on “Towns in Urban Development: A Case study of their Demographic, Socioeconomic and Structural Importance” has important conceptual, empirical and governance implications. These are discussed in the detail in this section. Firstly, there are many studies ongoing in India related to the urbanization and its related issues such as economic growth, migration, urban policies, smart cities, regional development and income distribution (Colmer, 2015; Tripathi, 2013; Singh, 2018; Mathur, 2016; Tumbe, 2016; Pandit, 2012 and Mukherji, 2009). Moreover, the formulation of national urban policy of India has gained momentum especially since last year.

Map 1. Introduction to Study Area Jabalpur (Madhya Pradesh, India)



Source: Census of India, Jabalpur District Census Handbook – 2011

Table 3. Distribution of Towns in Jabalpur District

City / Towns	Class - Size	Civic Status	Population (2001)	Population (2011)
Jabalpur	I	Municipal Corp.	956107	1081677
Jabalpur Cantonment	II	Cantt. Board	66499	72261
Sihora	III	Municipality	37870	44048
Panagar	III	Municipality	25199	27932
Katangi	IV	Nagar Panchayat	17062	19040
Suhagi	IV	Census Town	8145	14787
Patan	IV	Nagar Panchayat	13213	14624
Karmeta	IV	Census Town	*(New census towns)*	14452
Bilpura	IV	Census Town	11819	14349
Shahpura	IV	Nagar Panchayat	11958	13601
Majholi	IV	Nagar Panchayat	11318	13210
Barela	IV	Nagar Panchayat	10880	12620
Manegaon	IV	Census Town	9167	12599
Maharajpur	IV	Census Town	*(New census towns)*	10728
Khamaria	V	Census Town	14539	9839
GCF Jabalpur	V	Census Town	15283	9285
Amkhera	V	Census Town	*(New census towns)*	8957
Vehicle Factory Area	V	Census Town	11958	8087
Harduli	V	Census Town	*(New census towns)*	7682
Bargi	V	Census Town	*(New census towns)*	6916
Madai	V	Census Town	*(New census towns)*	6743
Bhedaghat	V	Nagar Panchayat	1840	6657
Pipariya	V	Census Town	4483	5084
Kundam	VI	Census Town	*(New census towns)*	4856

Source: Census of India, Town Directory - Madhya Pradesh 2011

In line with this ongoing research, this dissertation makes a major contribution in understanding the complex relationship between urbanization, development and economic growth. Secondly, the findings of this study suggest that there is a need to reexamine the classification of urban areas in India. The urbanization pattern in India is mainly characterized by a few highly populated large cities and a large number of small and medium towns. At present, 70 percent of the urban population resides in 468 Class I cities and the remaining 30 percent is distributed in 5,705 towns in India (Colmer, 2015). The definition of urban areas in India has been rigid since 1961. The oversimplification of the classification of urban areas can be seen as a major criticism in the definition of urban area in India. As such, the designation of a settlement as "urban" upon acquiring a minimum threshold of 5,000 people is only a statistical measure that is simply adding the number of towns in the overall urban growth. The lower order urban settlements remained classified as urban with little attention paid to their jurisdictional, organizational and administrative components (Colmer, 2015; Sircar, 2017 and Singh 2018). Lastly, the New Urban Agenda of UN-HABITAT III strongly emphasizes on the development of towns, suburban and peri-urban areas for strengthening the rural – urban linkages. The analysis on urban services, infrastructure, governance and finance as conducted in this dissertation indicates that there is a strong need to revamp the overall organizational set-up of the urban local bodies of the towns. It is observed that lack of proper training, low salaries, poor maintenance of infrastructure, poor finance bases and tax recovery are the major hindrances in the development of towns. Therefore, it is important to bring the towns in the urban policy and governance framework at least at the state-level where the apex institution's decisions are aligned with global interests of New Urban Agenda and Sustainable Development Goals 2016.

1.5 Research Organization

The dissertation is divided into five chapters. Following the Introduction, which spells out the research background, purpose, objectives, scope, limitations and significance of the study and also provide a brief overview of the study area. Chapter 2, Chapter 3 and Chapter 4 contains the main analysis of this study.

Chapter 2 is titled as *The Demographic and Socioeconomic Assessment of Towns*. In this chapter, a detailed analysis of the population growth, distribution and structure of workers and the total number of urban services and functions present in the towns has been carried out. The purpose of this chapter is to highlight the importance of towns as major centers for supporting the basic urban services and functions for the surrounding settlements in the overall settlement system. There are three important tools used for the analyses of the data in this chapter namely; (i) primate city index, (ii) rank-size rule and (iii) centrality indexes (based on population served and number of functions present). This chapter holds significance in terms of highlighting bottom – up planning by taking the rurban clusters and agropolitan development approaches to develop and strengthen the socioeconomic and urban functions basis of towns.

Chapter 3 is titled as *Decentralized Urban Governance: Measuring Governance Dimensions, Functions and Finances.* The purpose of this chapter is to reflect on the development of decentralized reforms in India, which is called as 74th Constitutional Amendment Act, for improving the urban governance of the urban local bodies of the towns. This chapter shows three important aspects related to the governance of towns namely; (i) decentralized governance structure in towns, (ii) the functions performed by the urban local bodies as per the 18th schedule functions mentioned in the 74th Constitutional Amendment Act of 1992 and (iii) the state of the municipal finances in the development of towns. It is argued in this chapter that the decentralization mandate of the Government of India was introduced to fulfill the gaps in urban governance that existed previously under a centralized management with little autonomy of the urban local bodies. However, there are several challenges that are specific to urban local bodies

of the towns. The municipal corporations are mainly inherited with stable administrations but in the municipalities and nagar panchayats there is a need to build everything from scratch which means taking on new administrations possess political, institutional, technical and economic challenges.

Chapter 4, entitled *Unlocking the Potential of Towns to Stimulate Urban Development,* provides a snapshot of the opportunities and challenges of the small and medium towns. In this chapter, an urban development index has been developed by selecting thirty – eight indicators which are further disaggregated and grouped under five dimensions namely, urban growth, economic development, physical infrastructure, human assets and social infrastructure. Based on this analysis, the opportunities existing in the towns were identified and prioritized as short – term action plans for the development towns. The main purpose of this chapter study is to provide a general direction for the integration and development of towns in the present urban development discourse of India. Lastly, in the concluding chapter, a summary of the results and discussions as presented in the preceding chapters has been discussed in detail.

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CHAPTER II

DEMOGRAPHIC AND SOCIOECONOMIC ASSESSMENT OF TOWNS

2.1 Introduction

This chapter examines the demographic and socioeconomic importance of small and medium towns in a settlement system. The study is aligned with the global interests related to the role of small and medium towns in supporting national and regional development. However, it has been postulated that these lower order settlements are facing challenges of urban management such as meeting the basic urban infrastructure and services needed to attract investment (UN – HABITAT, 2016). Underlying this thrust, is the New Urban Agenda of HABITAT – III conference which was held on October 2016 in Quito (Ecuador). The New Urban Agenda supports the Sustainable Development Goals (for the year 2030) including the SDG 11 of making cities and human settlements inclusive, safe, resilient and sustainable (UN - HABITAT III). The HABITAT - III draft note describes that the key driver for the implementation of SDG 11 agenda are “urban – rural linkages”. These linkages are mainly concerned with the flows of people, capital, goods, employment and information technology. Hence, the agenda clearly calls for “strengthening the capacity of rural service centers, and small, intermediate and secondary towns to attract populations, increase investments, create jobs and reduce reliance on primate cities, as a strategy to promote decentralized growth” (Resolution SP/GC/25/L.9, HABITAT III issue paper 10).

Keeping in view the relevance and importance of the issue, the Government of India endorsed New Delhi Declaration in December 2016. The declaration highlighted that “urban – rural linkages” have significant relevance for achieving a balanced urban and rural development in India. The focus of the working group in this declaration is to develop policies towards

integrated development of cities, towns and their peripheral areas (APMCHUD, December 2016). It also identified that the key drivers relevant to India in bridging the urban – rural gap are territorial and spatial planning, improving governance mechanisms and urban – rural partnerships. In line with this declaration, a country level report was prepared by Ministry of Housing and Urban Poverty Alleviation in 2016 which emphasizes that small and medium urban centers have a significant role to achieve a balance between urban and rural areas. It has been argued that while India has a scheme for the development of SMTs, it is overwhelmingly focused on infrastructure. Hence, the report clearly spells out to fill the urban - rural gap by adopting a regional planning approach to strengthen the connections between urban and rural areas (India HABITAT III report, 2016).

In line with the above arguments, this research acknowledges the development of small and medium towns and analyzes the role of towns from three perspectives. The first perspective is on the importance of small and medium towns themselves. A review of literature shows that small and medium towns are the catalysts for rural development. They act as market centers offering a wide variety of functions such as agro processing units, trading centers, storage, banking and institutions serving the rural population. However, their role in a regional or spatial planning framework is less studied. Therefore, to understand an integrated development of a region this study focuses on the theoretical concepts of the role of lower order settlements (Rondinelli, 1983; Tacoli, 2006; Mathur, 1984; Owusu, 2008; Bell & Jayne, 2009; Hinderink & Titus, 2002).

The second perspective is related to the population distribution across city sizes. Theoretically, there are three main theories that explains the existing pattern of settlement in a region namely, primate city, rank – size and central place. Scholars have argued that India's urban system does not indicate any primacy and rank –size distribution of settlements (Ramachandran, 1989; Schafer & Dimou, 2012 and Mathur, 2014). Despite the relevance of such observation at the national level, this research study assesses the primacy at the state level and

rank – size rule at the local level. It is important to empirically examine these theories since the presence of primacy and rank – size relationship will substantiate the level of urban development in the study area.

The third point is on the issue of functional assessment of small and medium towns. As pointed by Rondinelli (1983) the value of small centers is not so much in population size as in their functional characteristics. It is asserted that the bases of development in urban areas is usually associated with different economic and social functions, technological and institutional specializations (Leeds, 1979). Therefore, the analysis in this study is related to the provision of basic urban functions such as hospitals, schools, universities, industrial training centers etc. and the total weight of these functions that indicate the importance of small and medium towns. The analysis will help in understanding relationship between the pattern of settlements and the level of development.

The sudden growth in the number and share of towns has become a priority for urban development in India. The significant part of urban growth has been contributed by the growth of new towns (mainly called census towns in India) in the last decade 2001 – 11 (Mahalaya, 2011). There is a plethora of studies that have focused on the emergence of small towns as market centers and non – farm employment generators for rural population. Unfortunately, despite the significant growth of new towns, they remained ignored in the policy discourse. This can also be attributed to an extent to the absence of a proper urban governance and administrative structure which ignored them from the political discourse of the government (Sharma & Vora 2017).

In addition, the focus of urban and regional development theories by scholars such as Christaller's central place theory, Losch & Weber's industrial location theory, Myrdal – Hirschman's center – periphery theory and Perroux's growth pole have identified a locational dimension and dynamic relationship between a central place or core and its periphery (Ramachandran, 1989; Glasson, 1978). However, the role of smaller and medium settlements to promote rural and regional development still requires a detailed investigation.

Therefore, this research explores the demographic and socioeconomic basis of small and medium towns and attempts to addresses pivotal questions on city – size distribution and urban functions. The relevant questions are: To what extent does the settlements follow the theoretical norm of urban primacy and rank – size rule at the state and district level? Does the rank – size relationship in the settlements has been constant or are there any significant changes in the rank – size distribution? How far does the urban functions present in the small and medium towns are sufficient in terms of area served?

2.2 Literature Review: Towns in Urban and Regional Development

In this section, I explore the relationship between morphology of settlements and their functional importance. This section involves a discussion related to general theoretical framework on the urban system research which highlights the absolute importance of urban centers in relation to their functional linkages. In general, the process of spatial development is related to two concomitant forces, concentration and dispersion (Hagerstrand, 1968). The forces of concentration lead to clustering of human activities whereas dispersion leads to an even spread of such activities (Mishra & Sundaram, 1974). Based on the tendencies of concentration and dispersion, several scholars have advocated theories and models of spatial organization and socio – economic planning (Sharma, 1984). However, in this section an attempt has been made to review the theories and models on the regional development aspect.

The concept of “region” is an essentially contested concept. In geography, the significance of region is more generally of the spatial constitution of economies and societies. In policy and practice, the region is seen as key territorial unit in the era of globalization linked to a variety of measures to devolve responsibility for regional socio – economic development and well – being to the regional level (Krugman,2000; Keating, 2003; Urry,1985; Lovering,1999). As suggested by Thrift (2002) the construction or delineation of a region depends upon two processes. The first process is about the metaphorical drawing of lines to mark out the boundaries of a region on ground and the second is based on the statistical indicators that allows

the socio-economic profile of the region to be defined. These indicators help in identifying the problem areas and formulating policies and monitoring by the state and central agencies.

Regions are also important part of the development process in the developed and developing economies. The process of development is essentially related to the macroeconomic conditions of a region. This indicates towards geographic distribution of human and natural factors determined by availability of resources such as human capital, raw materials, technology, land, basic infrastructure, financial capital, economic structure and natural advantages (Capello, 2011). In today's time, the most striking form of development is the rise of dense regional agglomerations. These agglomerations are city – regions that have complex internal structures with multiple urban cores, extended sub – urban areas and wide hinterlands. These city – regions are engines of the national economies and are sites of dense masses of interrelated economic activities that have high levels of productivity (Scott & Storper, 2003).

These findings indicate that the opening of markets and technological progress have tended to strengthen urbanization. However, it is also true that the differences in development of regions are inevitable. These mainly arise due to unequal distribution of the resources hence regional theories and models are developed to bring them closer to policy discourse and improvement of regional backward or underdeveloped areas (Tulumovic, 2015). A review of regional theories and models have been presented in the subsequent paragraphs and it is selected from a diverse literature on the subject.

The first set of theories in regional development is related to the polarized development. Polarized development is a non – uniform development whereby most often urban agglomerations the major growth units for such as income levels, employment, infrastructural facilities, education and technology (Sekula, 2001). Therefore, the first important theory in polarized development is on the growth poles by F. Perroux, who set the foundation of this theory during 1950s. According to Perroux, growth does not appear everywhere at the same time, it manifests itself in points or "poles" of growth with variable terminal effects for the economy as a

whole (Glasson, 1978). It is the role of key industry which propels the economy of a region to move ahead. The growing industries affect other industries and in the process the total output of the economy of the region. Inter – industry linkages and interdependence play a major role in growth pole theory. Perroux defined polarization as the process where economic activities in different points of space (such as centers or poles) are spread out in different intensity as per the growing industry (Glasson, 1978). This also implies that the process of the development will depend upon the degree of intensity of the growth poles and spread out effects will vary for different regions. Therefore, the concentration of production activity, especially at the lower levels, is concerned with fewer number of poles and in that way to use the advantages of the process. Hence, spreading of the development effects can cause lowering the differences in development (Patnaik, 1982). However, critics pointed out that Perroux's proposition fail to empirically test the implementation of the concept.

The second influential theory for unbalanced development was put forward by Myrdal – Hirschman and was called as "center – periphery" model. The main assumption of this theory was that it is the process of "cumulative causation" that leads to regional inequality. According to Myrdal, once a region starts growing faster than the average the efficiency wage in that region tends to fall. As a consequence, it tends to acquire a cumulative competitive advantage over slow growing region (Patnaik, 1982). Therefore, Myrdal and Hirschman developed the core – periphery model which explains that there are two types of effects: "spread effects" and "trickling down effects". The "spread effects" consist of investment activities flowing from the center to the periphery such as supply of raw materials for industries in the periphery or the purchase of its products for the core activities. Such effects have also been named by Myrdal and Hirschman as favorable effects which gives rise to new core regions and further spreading their effects to their peripheries. The "trickle-down effect" consists of the flow of labor and capital out of the periphery to the core causing an economic degradation. This is also named as "backwash effect" by Myrdal and "polarization" by Hirschman. Myrdal – Hirschman postulated that the key issue for the

development of a region is the balance between these two effects. When the “spread effects” dominate it leads to greater economic integrity and a more homogenous region. On the other hand, if the “trickle-down effect” dominates it leads to a weak periphery leading to regional dualism (Patnaik, 1982 and Tulumovic, 2015). However, Myrdal – Hirschman considered government intervention an important factor for not giving rise to regional dualism or disparity.

The idea of core – periphery is straight forward where the core develops faster because of human and economic advantages and other areas that lack these advantages become the less important periphery. However, there is one more model which explained that a national economy moves through its spatial organization from pre – industrial, agricultural stage to mature industrial stage. The growth model of stages which was developed by John Friedman in 1966 (Glasson, 1978). He used the core – periphery model to represent the emergence of a regional urban system. According to Friedman, a spatial system goes through four stages of development. In stage one, there are localized economies with small settlements and agricultural activities dominate. Stage two is a transitional period between agriculture and industrial representing capital accumulation and industrial growth. In this stage an urban core develops and trade and mobility increases. Stage three is the industrial stage where a process of economic growth and diffusion, other growth centers emerge. This diffusion is mainly because of increasing land and labor costs and increased interaction between the elements of urban system. In stage four, a more connected and inter- dependent system of cities emerge and the national economy is fully integrated into a more homogeneous system and regional dualism decreases (Rodrigue, 2017; Patnaik, 1982; Capello, 2011).

The second set of theories in regional development is on location models. Theories of location deal with the organization of economic and human activity in geographical space and to pinpoint different factors that influence the location decisions and the location pattern that emerges under different sets of conditions (Dhimitri et al., 2015). The theory of least cost to location was basically originated with Von Thünen and Alfred Weber. Von Thünen’s theory is

related to agricultural sector before industrialization started. He assumed an “isolated state” where a city is located at the center. This homogenous land is flat with no physical barriers and incorporated four areas surrounding the city center. He concluded that farm products would be grown in a series of concentric zones outward from the central market city. The cost of transporting different farm products to the central market determined the agricultural use of the land around the city. The most productive activities were located closest to the market on more expensive land, and less productive activities were further away on cheaper land (Rodrigue, 2017). Although this model is a good illustration for balance between land cost and transportation cost, it lacks the real world geographic features such as roads, rivers and highways that effects the distribution of human and economic activities.

The main assumption of Alfred Weber’s work was that firms will chose a location that minimizes their total costs. The main hypothesis of his model is an isolated region with one market, an isotropic plain with a function of distance and markets are located in a specific number of centers. The model also assumed perfect competition and posited three main factors that influence industrial location: transport costs, labor costs and agglomeration economies. The main drawback of his theory was the assumption of perfect competition, which is incompatible with spatial framework of the location of firms, technology, maximizing profit, technology and institutional factors (Rodrigue, 2017). Moreover, the theory was unable to explain the location choices of the firms and explanation regarding the cities of different sizes and the way these urban centers are dependent upon each other for performing different functions and for quality of services.

The “central place theory” by Walther Christaller (1933) is an attempt to formulate a general theory of settlements based on services activities. Christaller studied the settlement pattern in Germany and noticed that towns of a certain size are spaced equidistant. He made some assumptions such as all areas have an isotropic (flat) surface, an evenly distributed population and resources, transportation costs are equal and proportional to the distance.

According to the CPT the primary purpose of a settlement or market town is the provision of goods and services for the surrounding settlements. Such towns, which are centrally located and provide one or more functions, are called central places. Settlements that provide specialized goods and services are called higher-order central places. Lower-order central places are small market areas and provide basic goods and services that are purchased more frequently than higher-order goods and services. Higher-order places are more widely distributed and fewer in number than lower-order places.

The location of any central place is determined by the threshold of the population. The threshold refers to the smallest market area necessary for the goods and services to be economically viable. Once a threshold has been established, the central place also depends upon the range of a good i.e. the maximum distance consumers will travel to purchase goods and services. Since the threshold and range of a good defines a central place, the market areas for a group of central places offering the same order of goods and services will each extend an equal distance in all directions in circular fashion (Ramachandran, 1989; Patnaik, 1982 and Rodrigue, 2017). However, the assumptions in the theory have been unrealistic, for example, large areas of flat land are rare or people also vary in their shopping trends they might not go to the nearest center as envisaged by Christaller regarding the threshold and range of a good.

The conceptual and methodological constructs of these theories were based on the “multiplier and spread – trickle down effects” (Myrdal – Hirschman). The assumptions were related to the accelerated urban and economic growth at certain urban growth points or “growth poles” and reflected an obvious urban bias towards development planning (Lipton, 1977). During the period after 1960s the territorial approaches for spatial planning were mainly focused upon by way of development from below or “bottom – up” planning approaches. Greater focus was given on self-reliance and satisfaction of basic needs to break the dominance of core activities or areas. It was suggested that to overcome the regional disparity strengthening “urban - rural linkages” play a key role. Urban- rural linkages play an important economic role through the flows of

people, capital, goods and technology. Such flows can take different forms such as migration of seasonal workers, flow of goods produced in rural areas and delivered in urban locations an information flows such as ideas and knowledge for innovation and competitive edge in rural businesses (Pacione, 1988).

In the context of this new orientation a so – called “agropolitan approach” was suggested by John Friedman (1979):

> Agropolitan development seeks to create the territorial basis for a new balanced strategy incorporating industrial and agricultural development within new agropolitan units in ways which promote the symbiosis of urban and rural processes.

The implications of agropolitan growth in terms of rural centers and smaller settlements are constructive and positive. The lower level settlements (small and medium towns) are the basic economic activity nodes where rural population exchange their agricultural products and goods and services. It means that within the hierarchical settlement system the upward flow of agricultural and craft items is introduced through the small and medium towns to the upper hierarchy. Moreover, these towns are the final destination of the downward movement of goods and services oriented for rural consumption (Ertur, 1984).

Agropolitan development presented an alternative strategy for regional economic planning. Accordingly, it has received more attention than other less focused strategies of development “from below”, in which rural questions feature more prominently. However, there have been a few drawbacks of this approach such as underfunding of programs, lack of political support, poor implementation and the organizational set up the agropolitan development was also poorly developed. Therefore, agropolitan strategies have as yet not been subjected too much planning policy (Pacione, 1985). But, there are few district approaches to rural development in countries such as Sri Lanka, Bangladesh, South Korea and Malaysia, and in four African countries (Kenya, Tanzania, Botswana and Lesotho) that have been discussed by Conyers (1985).

Recent literature findings show that agropolitan development can be considered as one of the important element for regional development. The main features can be like regional development as per local uniqueness, equity among the communities considering the base economic activities and sustainability and harmony. The main reason for success behind the regional development is the region's ability (human and local capital) to develop all potential resources (Prasetiya et al, 2014).

The most important focus in regional development has been on the role of small and medium towns (Johnson, 1970; Rondinelli, 1983; Tacoli, 2006; Mathur, 1984; Njoh, 2006 & Owusu, 2008). The main conclusion drawn from the theories and models of growth center and centrality showed that these theories and models do not generate socio – economic development especially in the lower order centers. Therefore, as suggested by Rondinelli and Ruddle (1978) that there should be an emphasis on urbanization, rural development and small-scale settlements. They suggested that a balanced spatial system can be achieved by focusing on "development from below" by providing basic services and infrastructure to the smaller settlements. In other words, the goals of national economic development cannot be achieved without increasing the interaction among villages, market towns, small and intermediate towns and cities especially in developing countries.

The main reasons for developing middle - sized settlements are to redistribute urban population and reduce polarization in the settlement patterns (especially in developing countries), facilitate development of rural regions and ensure the benefits of urbanization and industrialization spread more equitably than just in few selected growth poles (Rondinelli, 1982 & Ruddle, 1983). However, these towns have not been able to develop due to poor quantity and quality of social and physical infrastructure or the location of these settlements in the urban settlements pattern that did not serve the expanding economy. Moreover, lack of political and administrative incentives hindered the development of smaller urban centers. Hence, there is a

need to understand the role of small and medium towns in the urban network (Bolay & Rabinovich, 2004; Satterthwaite, 2016; Unsal, 2004; Brenner, 1999).

Recently, urbanization studies have focused upon the rural – regional dynamics. The new term that has been used by several authors are “Rurban” centers and “Rurbanization”. According to Roberts (2016):

> Rurbanization is a phenomenon associated with the recolonization of small and intermediate towns. Many small and intermediate towns have taken on urban characteristics of mixed non-rural based land use activities, and employment. Often, they have a high number of home-based or microenterprises, and improved access to services such the internet, reticulated water and waste collection. Rurbanization is a process of rural transformation. It leads to enhanced linkages and migration, where rural activities become more intractably linked to the activities of towns and cities, whether this involves seasonal labour, value-added processing or daily or more regular access to education and municipal services.

Ying Li et al. (2011) postulated that rural urbanization is a process zones between city and country-side. In this process, a town is like a small branch of a city where the process of industrialization is ongoing and it transfers the primary products from the countryside to the city to improve circulating of goods and the redistribution of goods and services. Therefore, a town is crucial and a unified factor in this process. H. Long et al. (2009) argued that rapid industrialization and urbanization have changed the rural areas in the aspects of land use pattern and rural workforce. This is mainly because the development of rural areas is linked to the exertion of the functions in the countryside. An interaction of the rural areas with social and economic transformations of the countryside is important in order to achieve a balanced and coordinated rural – urban development, especially in the developing countries. Kovách & Kristóf (2009) have discussed about the role of intermediate actors (defined as the groups mediating between rural producers and urban consumers, decision makers and fund users, and in mechanisms that transmit rural goods and services). Kovách & Kristóf (2009) presented a comparative perspective on new rural development needs to recognize the significance of the roles of intermediate actors for the activities undertaken which includes the motivation of local actors and the

commercialization of rural goods and services. This comparison included the capacity of intermediate actors to adapt any policy or regulation depending upon their social, political and economic interests and building a new urban – rural relationship.

The role of intermediate and rural areas is important for a balanced regional planning. The aim of this process is to include the rural people and small towns into the global social system which can improve the economic and social position and also the overall development. This process can best be achieved by creating a few favorable conditions such as: 1) effective integration of urban – rural and spatial development, 2) integration of rural development and sectoral policies relevant to rural development such as agricultural, transport and environmental, 3) greater spatial efficiency of sectoral policies, 4) focus on the development of rural areas based on consideration of local particularities and potential, 5) greater motivation for the inclusion of people in development initiatives and programs and 6) more efficient direction of institutional and financial arrangements (Vasilevska, 2010).

In the settlement hierarchy, there are small and medium sized urban centers which have a rural environment but are involved in a process of widespread urban development. These settlement models of urban countryside are neither rural nor urban. These are mainly characterized by under – used open spaces, housing colonies, a small market and a new form of governance. These small and medium sized urban centers are the future areas which are yet to be urbanized (Bedini & Bronzini, 2016). Kress (2016) argues that urban – rural realities are deeply entangled and belong together. The urban – rural spaces are urbanizing zones which are characterized by rapid change of structural formation, makeshift or temporary buildings, social heterogeneity and multiple forms of mutual exchange and bidirectional mobility between the city and the countryside.

The rurban centers have also been identified as small towns or large villages with existence of rural and urban activities both. These centers are now becoming popular migrant areas for nearby rural settlements. They usually have low density that lies between rural and

urban settlements. The urban amenities that exist in rurban centres are mainly retail and wholesale marketing, post and telegraph facilities, market, dispensary, rural professional services, high school and community block development offices. The occupational structures of residents within these centers are generally involved in nonfarm activities. However, these centers deals with various morphological changes through time, such as increasing population density in rurban areas that can cause increased pressure on land resources, basic amenities and infrastructure facilities. There is a lack of proper land use planning and proper zoning leading to haphazard development. There is also increased conversion of agriculture land use to non-agriculture land use especially industrial and real estate (Kolhe & Dhote, 2016).

Ojha (2016) has discussed about the repercussions of rural to urban migration. It has been postulated that the rural migrants who come to cities for work and education purposes often ended up with poorer living conditions in the cities. To overcome the problem of migration, the Government of India launched “Rurban” mission which acknowledges and provide opportunity for development of areas between cities and villages, and it is a form of urbanization which is distinct from cities. These are the ideas which are emerging for the integrated rural development in India. These “rurban clusters” have a huge potential as thriving hub of multiple economic activities for livelihood security varying from food production to livestock rearing and dairy farming, various forms of forestry, aquaculture and cottage industries producing handicrafts.

The various urban and regional development theories discussed in this literature review show that there are two important theories in regional development: *growth pole* development based on the concept of polarization and the *location theories* based on the rational choice of economic activities and comparative advantages. These theories lack in the development mechanisms and the interventions to be brought put in different spaces through various interventions. However, there is one more viewpoint related to regional equity. According to Truelove (1992) equity implies a social or political consensus about the fairness or justice of the distribution of costs and benefits of a policy or program. The concept of equity is a complex and

value laden. It is often associated with who gets what and who pays. As postulated by Harvey (2006) regional inequality in demographic and economic terms is a key element within the production and reproduction of capital. The inevitable outcomes of this situation are the reinforcement of spatial inequality leading to lagging regions and regional economic differences which in turn restrict the opportunities for change and corrective actions (Pallares – Barbera, 2012; Martin, 2011 & Pike et al., 2010).

Zapta & Bates (2017) have argued for a regional planning that incorporates social equity into sustainability and livability principles. According to Zapta & Bates (2017) the equity goal is essential to regional planners to formulate policies and programs that will work towards addressing the needs of the underserved communities. The goal not only guides the principles of the work but it directs planners to conduct policy analysis and evaluate implementation along equity lines focusing on decision making process. Equity planning is not a technical process but it involves planning practices such as resource allocation and political economy of those allocations.

Lester & Reckhow (2012) discussed the scale of governance in regional development. They have argued that within a given region there are problems of institutional fragmentation, overlapping authorities, jurisdictional division among cities, counties and township has presented challenges for governance. Therefore, at the regional and metropolitan scale it has become increasingly important to consolidate the local jurisdictions into unified metropolitan governments in order to avoid free-rider problems, fiscal disparities, and rationalize public service provision. Brenner & Pastor (2011) have discussed in detail the megaregional inequity. Challenges include the processes affecting inequality immediately at the neighborhood level. The main point is that in megaregions where there is expanding land consumption, urban sprawl, housing, new job centers, more access to transport facilities, there emerges the issue of inability to coordinate between the basic public amenities. This basically leads to communities to separate and at the core of this are the issues of race, class, and segregation. In the regional development practice, it

is important to understand the political and social dynamics that could enrich and guide how we might generate policies and political will to overcome fragmentation. This is also linked to the cities and neighborhoods and tackle the problem of social segregation in meaningful and sustainable ways at metropolitan and regional levels.

This literature review showcased three important features for the “bottom -up” planning or “development from below” i.e the agropolitan approach to regional development, the role of small and medium towns rural – urban linkages and the concept of rurbanization. Moreover, in the study of regional development, the issue and study of spatial equity is also important. Thus, this research study investigates the propositions of small and medium towns based on their growth and functional importance to arrive at a deeper understanding of the development or underdevelopment of small and medium towns.

2.3 Case Study Area, Data Sources and Methodology

This research presents a geographical analysis of the demographic trends and settlement pattern of Jabalpur district in the state of Madhya Pradesh. The analysis relates to the spatial, demographic and functional features of the urban settlements in the study region. The data was collected mainly from the Census of India office based in New Delhi. The most important source is the District Census Handbook. The district census handbook is further divided into two parts of town directory and the village directory. The handbook contains information on the infrastructural facilities available in towns and villages. The second important census source is called the Primary Census Abstract. This abstract gives information on the demographic indicators such as total number of households, total population, number of literates, workers and non – workers. The collection of data forms major part of the analysis in this research. Hence, the approach adopted for this study is based on inductive analysis. An inductive approach aims to generate meanings from the data set collected to identify patterns and relationships to build a theory (Thomas, 2006).

In general, there are two common methods that are used in analyzing the city – size distribution and functional characteristics. These are rank – size rule and indexes of centrality. The first part of the analysis in this study is related to city – size distribution. To measure the spatial picture of urbanization in the state of Madhya Pradesh the index of primacy has been calculated. The law of primate city states that primacy is said to exist when the large city in a country or a region is exceptionally large in relation to the second largest city (Berry & Hortan 1970). The possible reason for the primate cities was explained by Mark Jefferson (1939) as the forces of agglomeration and the cumulative effects of agglomeration in the growth of large cities. According to Jefferson when the city attains the primate position it retains that position and eventually tends to overshadow all other cities. In such a case, the degree of primacy is said to be high. The index of primacy has been calculated by taking the ratio of the largest city to the second largest city:

$P1 \; / \; P2$,
where, P1 = Population of the largest city and
P2 = Population of the second largest city

The index of primacy has been calculated from the years 1961 to 2011. As the primacy ratio increases it indicates that the primate city is becoming more dominant. If the primacy ratio declines, it means that the population differences between the two cities is becoming narrow. However, the main disadvantage of calculating the primacy is that the primate city character does not adequately explain the distribution and unbalance in the settlement system (Ramachandran 1989). Therefore, to get a clear picture on the growth of a settlement system in the study area, Zipf's rank size (1949) rule has been applied. The main idea behind Zipf's rank –size rule shows that when cities are ranked according to their population from largest to smallest then each city will have population half the size of the preceding city (Berry & Hortan, 1970).

In this study, the population of the towns in Jabalpur district are arranged in descending order and the largest town is given the rank one in terms of population. The rank size is best

represented by taking the logarithm of the population on the Y – axis and logarithm of the ranks on the X – axis and plotting them on a graph. The logarithms of ranks (r) are regressed against logarithms of population (P) and the equation is expressed as:

$Y = a + bx$ where,
$x = \log r$ & $Y = \log P$

The two important parameters from this regression equation are the intercept and the slope. The intercept represents the population of the largest town and the slope represents, as indicated by Zipf, the presence of forces of diversification and forces of unification (Berry & Hortan, 1970; Ramachandran, 1989 & Dutt & Das, 1993). When the value of q (which represents the slope of best – fit line) is more than 0 and less than 1 then the forces of diversification dominate representing large number of smaller settlements. On the other hand, when the value of q is more than 1 then the forces of unification which represents the presence of one large city is assumed to dominate and there is a very rapid decline in the size of settlements with their ranks (Ramachandran, 1989 & Dutt & Das, 1993).

The forces of diversification generally indicate the presence of primary and secondary economic activities. The presence of forces of diversification indicates that the population is living in large number of settlements which are widely scattered. The location is determined by nearness of raw materials and primary activities like fishing, cultivation, lumbering and agriculture emerge. The secondary production centers are located at a greater distance but are in relation to the availability of raw materials. The forces of unification are mainly concerned with nearness to market and tertiary economic activities. The presence of forces of unification indicates that the dominance few large settlements where majority of the population is concentrated (Berry, 1961; Freidman & Alonso, 1962; & Ramachandran, 1989). To further test the dominance of type of economic activities, location quotients for all the towns in Jabalpur district has been calculated. Location quotient is basically “ratio of ratios” and used in determining the occupational specialization. The formula is as follows:

LQ = $(Mi\ /\ M)/(Ri\ /\ R)$
Where: Mi = employment in industry i in municipality
M = total industrial employment in municipality
Ri = employment in industry i in the region
R = total industrial employment in the region

A location quotient with a value greater than 1 indicate that the municipality is more specialized in that activity than the region and that the municipality may be engaged in export activity and satisfying the needs of other settlements. A location quotient less than 1 implies that municipality is less specialized in that activity than the region and may be importing goods and services to satisfy local needs (Rondinelli, 1985).

The functional importance of small and medium towns has been measured by calculating two types of centrality indexes. The first type of centrality index is based on the services and goods offered in a place. The centrality of a place has been measured by using the following formula:

$$Ck = \sum_{i=1}^{n} Nik.Wi$$

Where: Ck = centrality index of a place k
Nik = number of establishments for a function i in a place
Wi = weight of the function (determined by dividing the threshold population to the mean of the thresholds for all the functions)

The centrality index for the area served by a place has been expressed in terms of population. This index mainly includes the population and number of villages served by the towns. This index has been measured by using the following formula:

$$Ck = \sum_{i=1}^{n} \sum_{j=1}^{Nik} Pj$$

Where: Ck = centrality index of a place k
n = number of services
Nik = number of villages served by a place k
Pj = population of the village j

The centrality of a settlement helps in understanding the functional complexity and diversity of services available in each settlement hierarchy. In terms of regional development, the centrality measures can help to determine the basic functions in fulfilling the basic needs in lower order settlements which are otherwise highly concentrated in large cities (Rondinelli, 1985).

Madhya Pradesh is the central state of India, sharing its borders with the states of Uttar Pradesh, Rajasthan, Chhattisgarh, Maharashtra and Gujarat. Madhya Pradesh is divided into fifty districts and it is the second largest state in terms of geographic extent, covering an area of 308,252 sq. km. The state's total population is 72.59 million in which 28 percent of the total population is urban. There has been a steady growth in the rate of urbanization in Madhya Pradesh largely due to the development of industrial clusters. As per the Census 2011, Bhopal, Indore, Jabalpur, Gwalior and Ujjain are the top five districts with highest level of urbanization in the state (Census of India, 2011; Jabalpur CDP & SCP, 2014).

Jabalpur district lies the eastern part of Madhya Pradesh and covers total area of 5,211 sq. km which is approximately 1.7 percent of the total state's area. According to the historical evidence, three phases of urbanization can be traced in Jabalpur district. The first phase extends from protohistoric times till the fall of *Kalchuri dy*nasty in 14th century A.D. In terms of physical extent, the remains of this period have been traced around Bhedaghat in the form of several mounds, architectural and structural remains. The second phase is related to the rise of *Gond* power in 14th century A.D. During this period, a small township was established by this kingdom and it was called as *Garha*. The Gond period also indicates a strong presence of various religions such as Shaivism, Vaishnavism, Surya and Hindusim. The third phase of urbanization is marked by the coming of Marathas in 1728 A.D till the rise of British around 1814 and have known to build forts inside Jabalpur city (DCHB, 2011 & jabalpurdistrict.nic.in). The coming of the British laid the modern foundation in Jabalpur. The Cantonment, Gun Carriage Factory and Civil lines were established by the British. Jabalpur, along with Saugor and Nerbudda territories, became part of North – West province during this period. During the independence time, Jabalpur city played a

major role in the events and marches organized by eminent freedom fighters such as Subhas Chandra Bose and Mahatma Gandhi. The total urban population of the district is Jabalpur district is divided into seven *tehsils*[1] namely, Sihora, Majholi, Patan, Shahpura, Jabalpur, Panagar and Kundam. As per the classification by Census of India, there are 24 towns and 1424 villages in Jabalpur district (table 4 & map 2).

At present, the total population of Jabalpur district is 2.46 million out of which 1.44 million population lives in urban areas. The share of rural population (1.02 million) is obviously low in comparison to the urban population in the district. The absolute increase in the number of urban population in the district between 1951 and 2011 has been more than that of the rural population. There has been an addition of 1.18 million urban population and in rural areas the absolute increase in population is 0.61 million.

Table 4. Total Number of Villages and Towns

District	Sub - District	Towns	Villages
Jabalpur	Jabalpur	9	192
Jabalpur	Sihora	1	155
Jabalpur	Majholi	1	222
Jabalpur	Patan	2	222
Jabalpur	Shahpura	1	227
Jabalpur	Panagar	9	208
Jabalpur	Kundam	1	198

Source: Town Directory & Village Directory – Madhya Pradesh 2011, Census of India

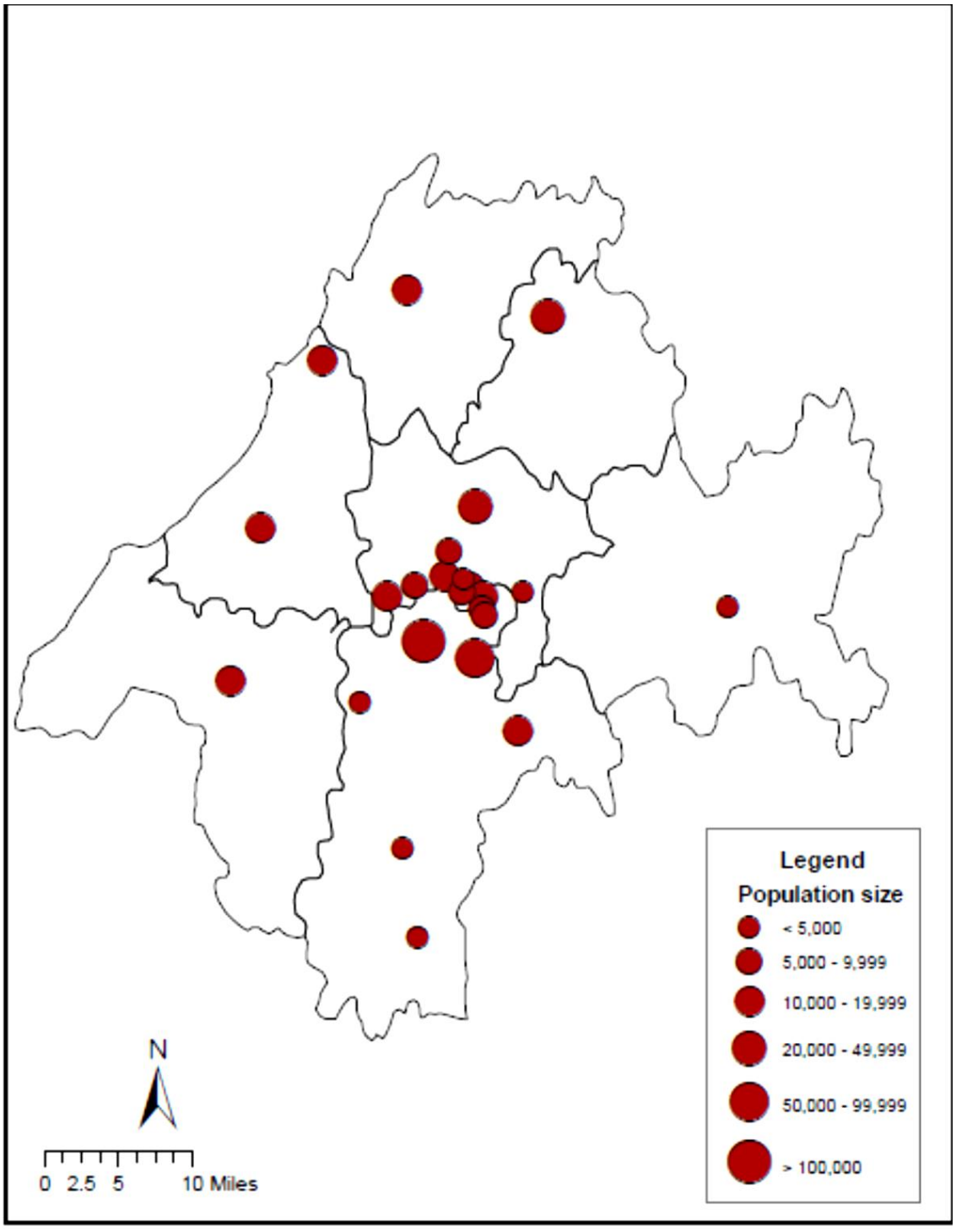
[1] A tehsil is an administrative unit term used in India which is lower in hierarchy to a district and above the city, town or village.

Table 5. Distribution of Urban & Rural Population (in million)

Census Years	Total	Urban	Rural
1951	0.66	0.25	0.40
1961	0.82	0.39	0.42
1971	1.11	0.58	0.53
1981	1.48	0.83	0.64
1991	1.76	0.99	0.77
2001	2.15	1.22	0.92
2011	2.46	1.44	1.02

Source: Town Directory & Village Directory – Madhya Pradesh, Census of India 2011

Map 2. Distribution of Urban Settlements in Jabalpur District (Madhya Pradesh)



Source: Census of India, Madhya Pradesh – Primary Census Abstract, 2011

2.4 Results

2.4.1 Urban Primacy at the State Level – Madhya Pradesh

The composition of the urban structure of Madhya Pradesh showed that there had been a sudden increase in the number of small and medium towns (Class II to VI) over the last two decades. The growth of Class I cities is also steady with persistent increase in the percentage of population in the Class I size category since 1961.

Table 6. Urban – System in Madhya Pradesh

	1961	1971	1981	1991	2001	2011
Class I						
Number	5	8	11	18	25	32
Pop	1358012	2342803	3767106	5898978	8466818	11162693
Urban Pop (%)	35.32	42.27	44.72	48.55	53.15	55.62
% increase in towns	-	60.00	37.50	63.64	38.89	28.00
Class II						
Number	5	11	20	22	26	31
Pop	379030	690419	1347132	1584263	1893954	2141049
Urban (%)	9.86	12.46	15.99	13.04	11.89	10.67
% increase in towns	-	120.00	81.82	10.00	18.18	19.23
Class III						
Number	27	34	40	64	94	113
Pop	867884	1095950	1272573	1864408	2748187	3332703
Urban (%)	22.58	19.77	15.11	15.35	17.25	16.61
% increase in towns	-	25.93	17.65	60.00	46.88	20.21
Class IV						
Number	47	63	91	140	152	177

Pop	649389	851219	1291285	1957107	2105878	2488808
Urban (%)	16.89	15.36	15.33	16.11	13.22	12.40
% increase in towns	-	34.04	44.44	53.85	8.57	16.45
Class V						
Number	78	73	93	106	85	113
Pop	543428	545553	736853	840459	686170	898306
Urban (%)	14.14	9.84	8.75	6.92	4.31	4.48
% increase in towns	-	-6.41	27.40	13.98	-19.81	32.94
Class VI						
Number	11	4	2	1	7	11
Pop	46638	16174	8956	4251	28161	45846
Urban (%)	1.21	0.29	0.11	0.03	0.18	0.23
% increase in towns	-	-63.64	-50.00	-50.00	100.00	57.14

Source: Town Directory – Madhya Pradesh 2011, Census of India

Despite the percentage variation in the class sizes it can be inferred that there is a stability among the urban settlement systems indicating that there is no convergence towards a common size – class. A common insight that can be gained from the growth of small and medium towns in Madhya Pradesh is that these towns upholds a uniqueness mainly due to population growth. However, the deviation can be seen in the proportion of population across the different class sizes in the state. The large population concentration in Class I is evident of processes of development in the higher order of settlements. The development dynamics is generally associated with dominance of economic activities, educational facilities, employment opportunities, cultural and administrative functions in the cities (Yousuf & Shah, 2014).

The index of primacy as shown in table 7, indicated that the urban primacy does not exist at state level in Madhya Pradesh. In other words, the ratio of the first largest city with the second

largest city in the state remains low. It shows that Indore, which is the largest city in Madhya Pradesh, is only 1.10 times bigger than the second largest city, Bhopal, and occupies its first position continuously since 1961. The state's index of urban primacy is also declining consistently between 1961 and 2001 and the increase between 2001 and 2011 seems to be insignificant.

Table 7. Index of Primacy in Madhya Pradesh

Year	Number of Cities	Index of Primacy
1961	Indore & Gwalior	1.31
1971	Indore & Jabalpur	1.26
1981	Indore & Bhopal	1.23
1991	Indore & Bhopal	1.04
2001	Indore & Bhopal	1.03
2011	Indore & Bhopal	1.10

Source: Town Directory – Madhya Pradesh 2011, Census of India

The state of Madhya Pradesh has a low level of urbanization. In fact, the total percentage share of the top five cities (Indore, Bhopal, Gwalior, Jabalpur and Ujjain) is very low, only 32.11 percent.

Urbanization has a direct impact on the economic development of state especially in terms of industrial development. The highly skewed urban structure, favoring small towns, shows that this system lagged in establishing strong industrial linkages due to dependence on agro – processing units (Singh, 2013). It has been projected that by 2026, the percentage of urban population to total population of Madhya Pradesh would be 34.8 percent which will be closer to that India's population (38.2 percent). However, the low urbanization index in Madhya Pradesh can be one of the impediments in its growth (Mathur, 2016).

2.4.2 Rank – Size Rule for Jabalpur District

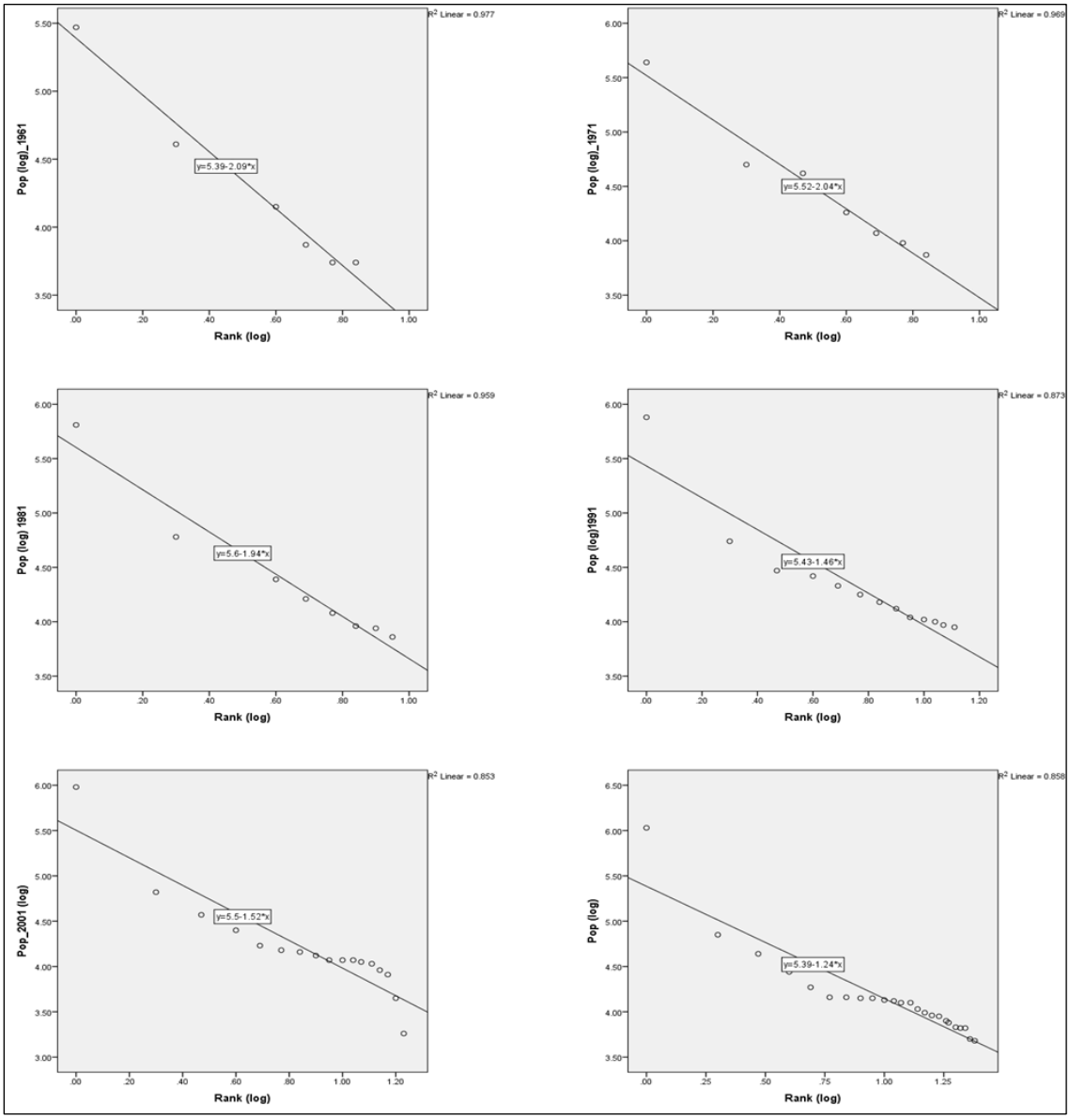
The analysis of the settlements as per the rank size rule and centrality index was attempted to validate the demographic and functional importance of lower order settlements in Jabalpur. The rank – size rule was analyzed by the empirical testing of the relationship between the population size and the ranks of the towns (figure 2 & table 8). All the towns in Jabalpur district were ranked in descending order of their population for each of the census (1961 – 2011) separately.

Table 8. Regression Analysis of Ranks and Sizes of Towns

Year	Intercept	Slope	R - square	No. of towns
1951	5.272	−2.22	0.984	3
1961	5.390	−2.09	0.977	7
1971	5.520	−2.04	0.969	7
1981	5.560	−1.94	0.959	9
1991	5.432	−1.46	0.873	13
2001	5.504	−1.52	0.853	17
2011	5.385	−1.23	0.858	24

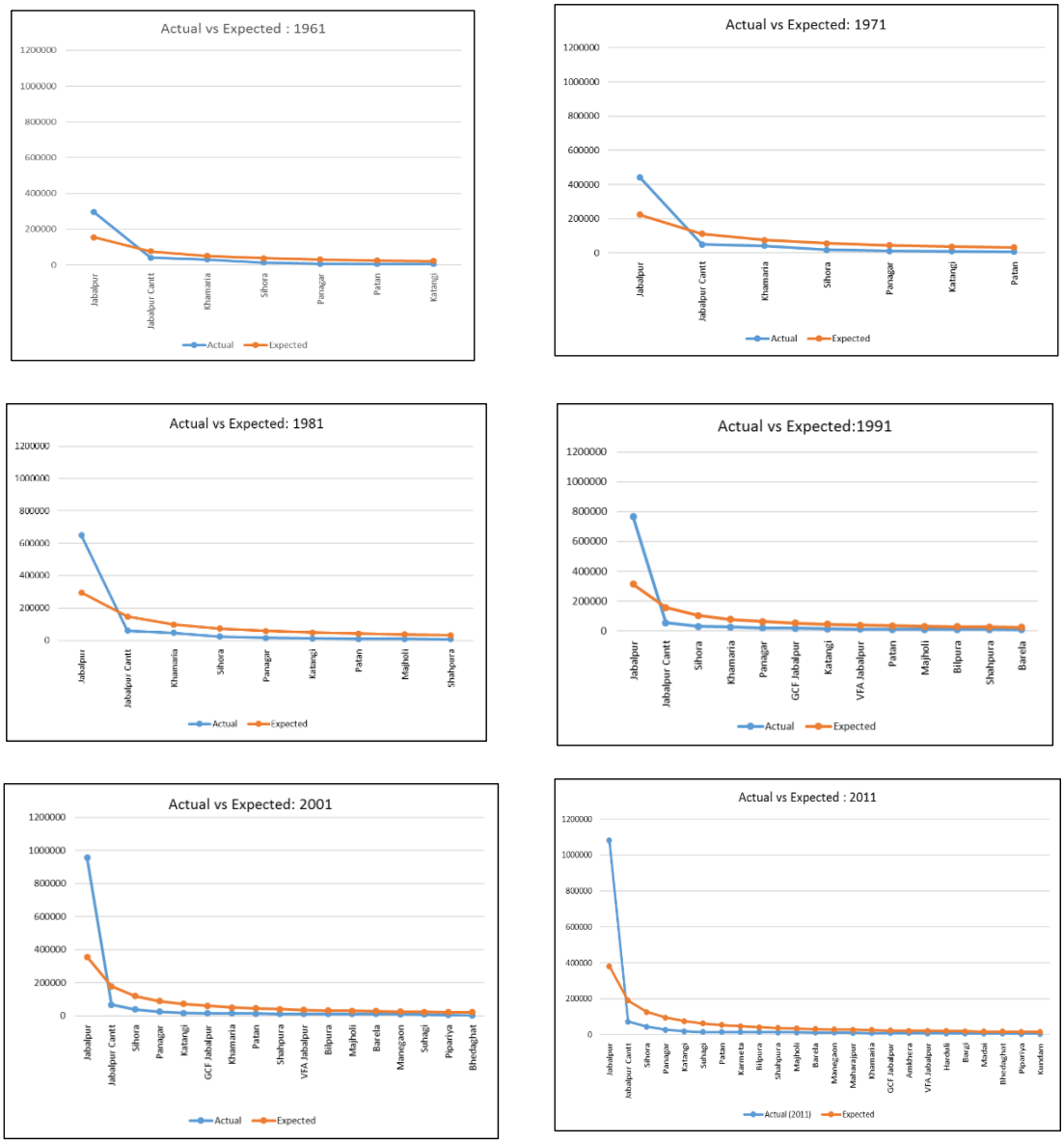
Source: Town Directory – Madhya Pradesh 2011, Census of India

Figure 2. Rank – Size Distribution of Towns in Jabalpur District (1961 – 2011)



Source: Town Directory – Madhya Pradesh 2011, Census of India

Figure 3. Actual vs. Expected Population of Towns in Jabalpur District (1961 – 2011)



Source: Town Directory – Madhya Pradesh 2011, Census of India

As shown in figure 2 and table 8, the logarithmic values of the population were regressed against the logarithmic values of their ranks for each of the census period. The results of the regression showed that the R – square value was high during 1951 and 1961 when there were very few towns. The value has been inconsistent since 1981 when Jabalpur district experienced a

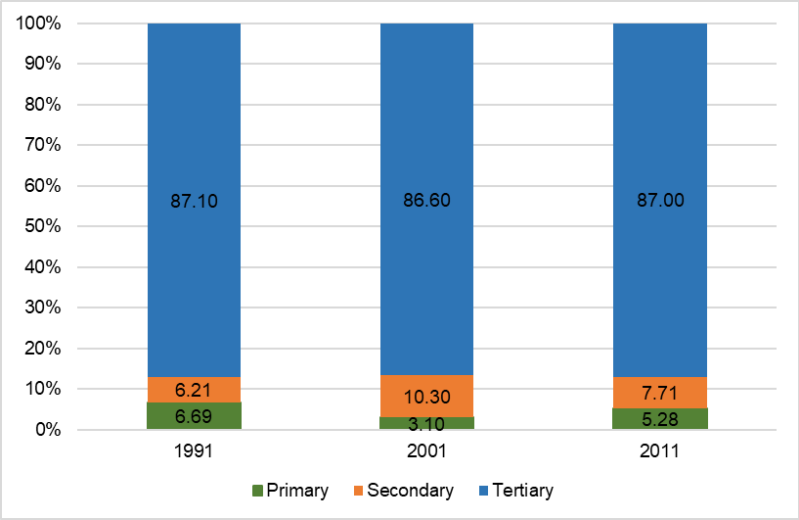
steady increase in the number of small and medium towns. Moreover, the deviations between the actual and expected populations of the small and medium towns in Jabalpur district also showed that the actual populations were much lower than the expected population for each census (figure 3).The analysis from the rank – size rule supports the hypotheses by Zipf that in a settlement system there always few settlements of large size and many settlements of smaller sizes. This relationship was hence proven from the intercept and the R- square values (as given in table 8). However, Zipf also postulated that there are two important factors - forces of diversification and unification that play a pivotal role in producing settlements of varying sizes.

In the case of Jabalpur district, the forces of diversification were found to be dominant. This phenomenon can be easily interpreted by the value of slope as given in table 8. The forces of diversification indicated a strong presence of primary or secondary economic activities. These forces are evident in determining the level of economic importance in the small and medium towns of Jabalpur. To further investigate on the economic specialization of the towns in the study area, a detailed analysis of the employment pattern for all the towns is presented below.

According to the Census of India there are two main types of worker classification: main workers and marginal workers. Main workers are those workers who had work for six months or more and marginal workers are those workers who had work less than six months. The information on the workers is generally available on four categories i.e. cultivators, agricultural laborers, household industry and other workers. However, for easy interpretation of the results, the employment pattern is analyzed by combining both main and marginal workers. Moreover, the categories of cultivators and agricultural laborers are combined to represent “primary” sector, the household industry is represented as “secondary” and other workers as “tertiary” sector workers. The employment pattern during last two decades (1991 – 2011) in Jabalpur district shows that there has been an increase in the non – agricultural sector employment (figure 4). In absolute terms, the total number of employees in the urban areas of Jabalpur district increased from 0.26 million in 1991 to 0.52 million in 2011, which showed an overall increase of 100 percent. In the

case of tertiary sector workers, the number of workers almost doubled between from 0.29 million in 1991 to 0.45 million in 2001. The increase in the number of workers in primary sector was slow, increasing from 0.01 million in 1991 to 0.02 in 2011, adding only 10,263 primary workers during last two decades. However, the secondary sector experienced highest growth during this period.

Figure 4. Employment Pattern in Jabalpur District (1991 – 2011)



Source: Town Directory – Madhya Pradesh 2011, Census of India

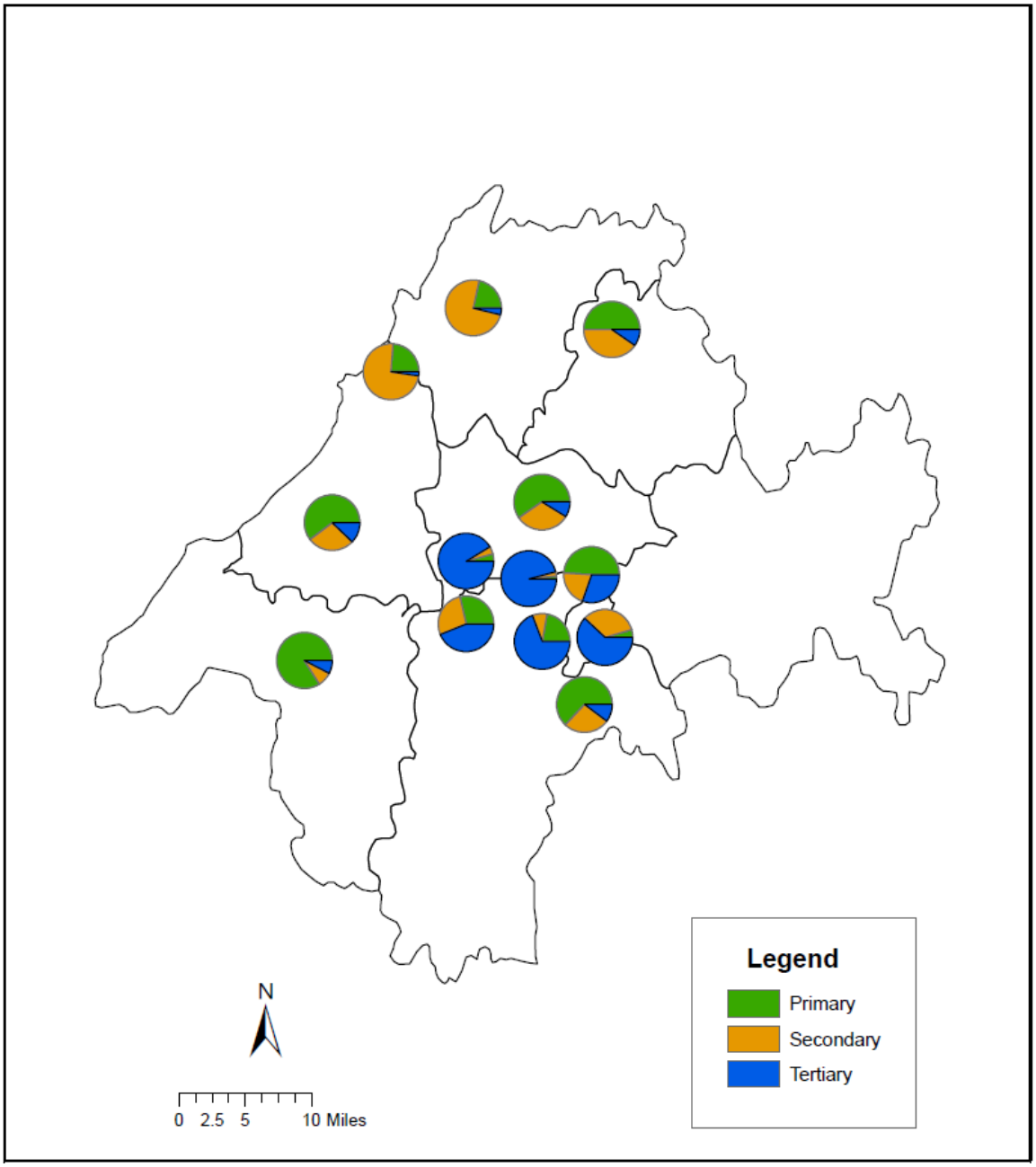
The distribution of the primary, secondary and tertiary sector workers were also analyzed based on location quotient technique. As discussed in the methodology section, the location quotient higher or equal to 1 indicates the specialization of a certain type of activity in that particular area. The results of the location quotients for the three years (1991, 2001 & 2011) have been depicted in the maps 3, 4 and 5, respectively. It can be interpreted from the subsequent maps that in past two decades, Jabalpur Municipal Corporation and its surrounding towns have maintained a high location quotient (more than 1) for the tertiary sector. As new towns were added such as Manegaon, Bilpura, Pipariya, Suhagi, Karmeta and Madai, the location quotient for the tertiary sector also became higher than 1 for them. Hence, it can be pointed that employment in tertiary sector indicated significant industrial base in and around Jabalpur city.

The location quotients for primary and secondary sectors were found to be higher in small and medium towns in Jabalpur district. Shahpura, Panagar, Barela, Patan, Sihora, Katangi, Kundam and Majholi have experienced location quotients more than 1 between 1991 and 2011. The increase in the primary and secondary sector also indicated that forces of diversification are becoming more dominant in the small and medium towns of Jabalpur than the forces of unification in determining the size and number of towns. The presence of one large city in the settlement system influences the forces of unification where people tend to live either in or near the city. The main reasons are the availability of jobs, higher education opportunities, improved medical facilities, presence of social and cultural functions and higher administration. Therefore, the forces of unification tend to become stronger as the city expands and attract the nearby smaller settlements due to the presence of high quality urban and economic functions.

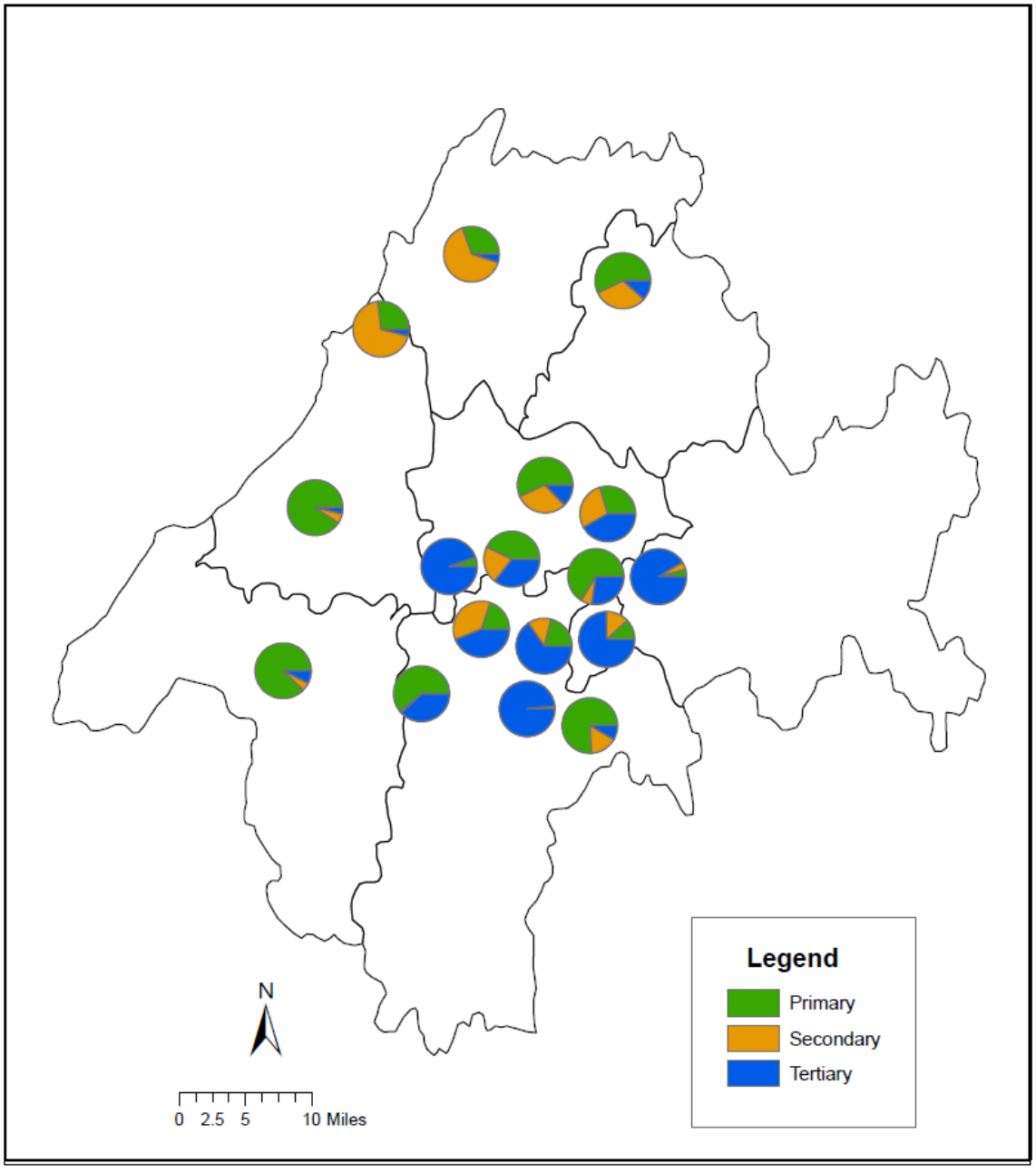
2.4.3 Centrality Index of Towns in Jabalpur District

A detailed analysis of the functional profile of towns in Jabalpur district is provided in this section. The functional characteristics of a settlement show the pattern and provision of services in a settlement system. It will also help in identifying the gaps in the provision of services by an urban center. The centrality index of the towns in Jabalpur district was calculated based on two criteria: 1) distribution of the functions and 2) on the area served by a town. To analyze the distribution of functions in the towns of Jabalpur district, the total number of functions present in the towns were divided into five major groups namely, health, education, banking, recreational and non – residential. The list of the functions for each individual town has been compiled in the table 9. There are five groups of functions still, all the towns do not have all functions and the level of functional complexity is not same in all the towns.

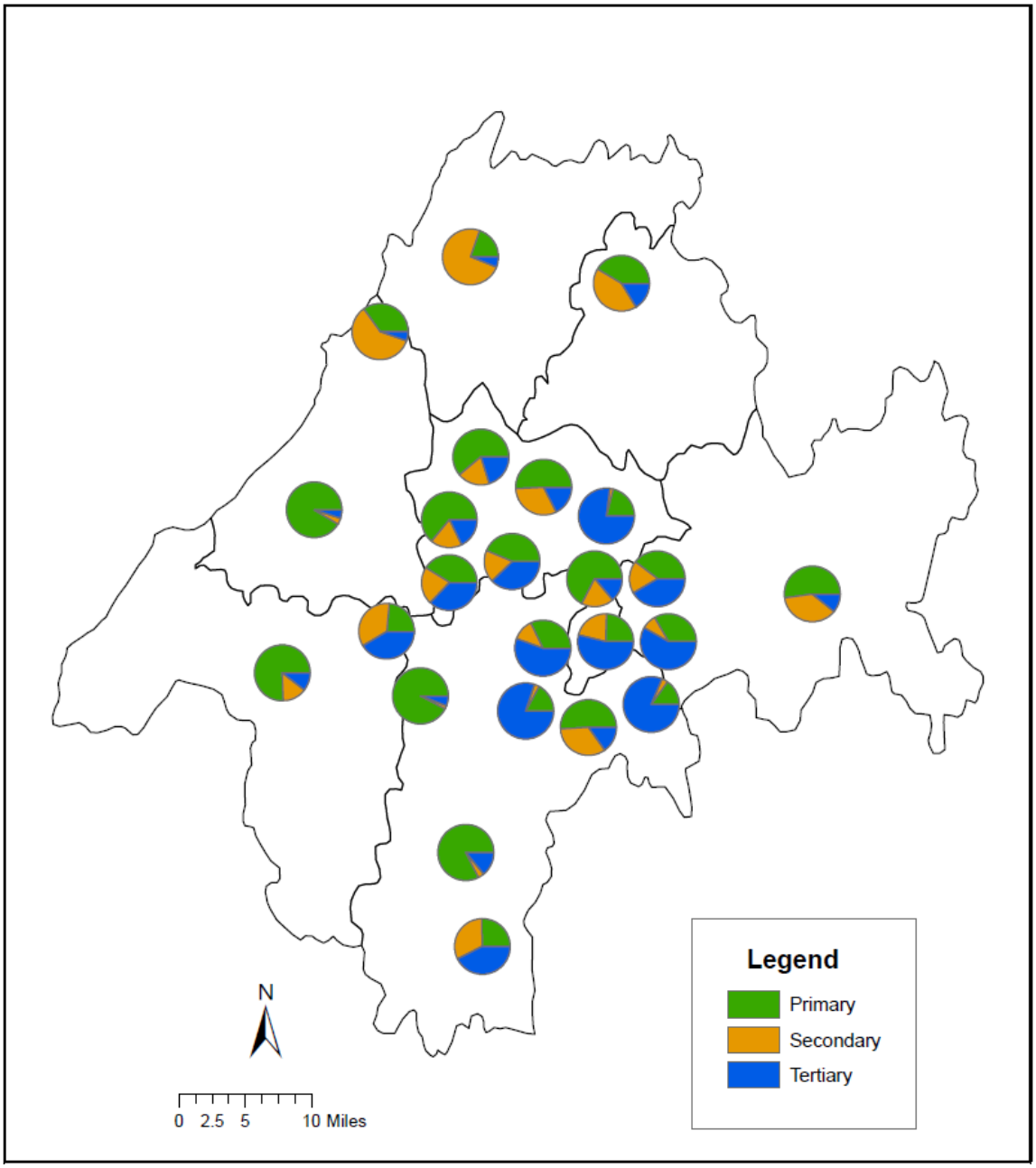
Map 3. Location Quotients for Primary, Secondary and Tertiary Sectors (1991)



Map 4. Location Quotients for Primary, Secondary and Tertiary Sectors (2001)



Map 5. Location Quotients for Primary, Secondary and Tertiary Sectors (2011)



Source: Primary Census Abstract – Madhya Pradesh 1991, 2001 & 2011, Census of India

Table 9. Functions Group and their Distribution

S.no	Function group	Total number of functions present in all the settlements
1	**Health** (hospitals, health centers, family welfare centers, maternity & child welfare centers, maternity homes, T.B hospital, nursing homes & other health facilities.	582
2	**Education** (schools, colleges & universities & other institutes)	1243
3	**Banking** (nationalized bank, private commercial bank, co – operative bank, agricultural credit society & non - agricultural credit society)	135
4	**Recreational** (stadiums, cinemas, auditoriums / community halls, libraries and reading rooms)	104
5	**Non – residential facilities** (such as old – age homes & working women's hostel)	3

Source: Town Directory – Madhya Pradesh 2011, Census of India

Therefore, to assess the centrality index, based on the first criteria, a weighted centrality index for each of the towns was calculated. To arrive at the centrality index, the functions were arranged based on their threshold values and weights to arrive at the score for a town's total service provision. This score was referred to as centrality score. The weights of the function (Wi) were calculated by dividing the threshold population for a function to the mean of the thresholds for all the functions. For example, the minimum threshold population for the hospital in the study

area was 8,800 and the mean of the population thresholds for all function was 14,828 then the weight of the hospital was calculated as 0.59. Similarly, the threshold population for schools was 12,000 therefore its weight was 0.81. Further importance of the small and medium town, was derived by multiplying the number of functions with its appropriate weight. Thus, continuing with the same example as given above, if a small or medium town had 2 hospitals then its centrality index for health services was (2 * 0.59 = 1.18). The weight (Wi) for the functions are given in table 10 below. The minimum threshold population for the functions showed that miscellaneous health facilities (such as mobile health clinics, charitable hospitals, non - medicine shops), nationalized banks and colleges and universities have the highest weights. Hence, this analysis indicated that the fundamental functions such as health, education and banking are common to all type of towns.

Table 10. Ranking of Functions

Functions	**Threshold of function (minimum population)**	**Weight of the function (Wi)**
Health		
Misc. health facilities	*42037*	*2.83*
Maternity & child welfare Centers	20676	1.39
Health centers	16950	1.14
T.B Hospital	10833	0.73
Hospitals	8800	0.59
Family welfare centers	7857	0.53
Maternity homes	7857	0.53
Education		
Colleges & Universities	*17934*	*1.21*

Schools	12000	0.81
Other institutes	8333	0.56
Banking		
Nationalized banks	*43094*	*2.91*
Cooperative banks	17328	1.17
Private commercial banks	9453	0.64
Non - Agricultural credit society	8594	0.58
Agricultural credit society	8214	0.55
Recreational		
Stadiums	19181	1.29
Auditorium / Community Halls	16209	1.09
Cinema theaters	9453	0.64
Reading rooms	9453	0.64
Libraries	9286	0.63
Non - residential		
Orphanage home	12500	0.84
Working women's hostel	12500	0.84
Old age homes	12500	0.84

Source: Town Directory – Madhya Pradesh 2011, Census of India

However, the differences were seen in the specialization of the function. For example, in a town schools are important functions as they not only serve the population of the town but the population of the nearby villages as well. Apart from this, colleges and universities are higher education institutes which might not occur in smaller settlements. Hence, the presence of specialized functions is an important characteristic for the development of a settlement. From the analysis of functions as given above, it became impudent to measure the centrality index based

on the functions present of small and medium towns in Jabalpur district. The centrality index of the towns based on the number of functions is presented in table 11.

Table 11. Centrality Index of Towns in Jabalpur District

City / Towns	Town Class Size	Centrality index (Based on functions in a place)	Number of functions
Jabalpur	I	1668.11	1073
Jabalpur Cantt.	II	169.11	107
Sihora	III	159.58	105
Panagar	III	126.18	70
Patan	IV	118.32	67
Kundam	VI	107.73	61
Majholi	IV	81.94	48
Shahpura	IV	72.01	45
Suhagi	IV	67.39	40
Katangi	IV	60.85	51
Barela	IV	60.64	37
Bilpura	IV	37.21	21
Khamaria	V	37.15	35
Harduli	V	29.98	26
GCF Jabalpur	V	29.42	29
VFA Jabalpur	V	26.47	25
Maharajpur	IV	25.45	20
Manegaon	IV	22.65	13
Bargi	V	21.46	20
Karmeta	IV	14.63	12

Bhedaghat	V	12.1	11
Pipariya	V	9.72	8
Madai	V	5.26	4
Amkhera	V	3.24	4

Source: Town Directory – Madhya Pradesh 2011, Census of India

The level of functional complexity is high in Jabalpur city and small and medium towns. As the town class size decreased, there was a decline in the number of functions. The centrality index based on the functions present showed that as the scale of settlement increases, there are better provision of services and these settlements are relatively self – sufficient. In other words, higher order settlements do not depend on any other settlement to satisfy their demand for services. For example, Jabalpur is the district's capital and had the highest centrality score and this conforms to the argument that a city is more specialized in functions and services and therefore attract large concentration of population.

The centrality scores for Sihora (159.58), Panagar (126.18), Patan (118.32), Kundam (107.73) and Majholi (81.94), Shahpura (72.01) and Katangi (60.85) indicated that service provision is also an important feature in the medium towns but the functional specialization in these towns has evolved gradually. These towns also hold an important administrative role. For example, Sihora and Panagar are the two main *Municipalities* in Jabalpur district. Patan, Kundam, Majholi, Shahpura and Katangi serves as *Nagar Panchayats*. Hence, as administrative centers the importance of the small and medium towns in the district was measured in terms of area served to the surrounding rural settlements (or villages). The location of towns near to a city also plays a critical factor for less functional complexity in other small towns. For example, Bilpura (37.21), Khamaria (37.15), Harduli (29.98), Pipariya (9.72), Madai (5.26) and Amkhera (3.24) are located near to Jabalpur city and have a low centrality index based on the functions.

The centrality index based on the area served by major towns showed the population of the nearby villages served by these. The centrality index here was expressed in terms of the average population served by a town considering a cluster of functions. There are additional functions that are available in these towns which serve the needs of the population from surrounding villages. The centrality index based on average population served is shown in table 12 below:

Table 12. Centrality Index based on Population Served by Selected Towns in Jabalpur

City / Towns	Towns	Centrality index	Number of villages	Number of services
Jabalpur	I	381182.13	442	80
Sihora	III	90040.44	203	63
Panagar	III	58668.11	160	64
Patan	IV	52964.38	160	64
Kundam	VI	4377.36	75	11
Majholi	IV	51700.66	162	64
Shahpura	IV	87781.70	227	64
Katangi	IV	17298.26	57	64
Barela	IV	4162.99	9	56
Bargi	V	2448.93	32	11

Source: Town Directory – Madhya Pradesh 2011, Census of India

The additional functions as compared to those mentioned in table 10 are, for example, post offices, agricultural marketing society, marketplaces, weekly markets, nutritional centers, birth and death registration centers and self – help groups. It can be summarized that the functional assessment holds true for small and medium towns as important centers that perform functions for urban and rural areas. The lower order settlements may vary in size, especially in

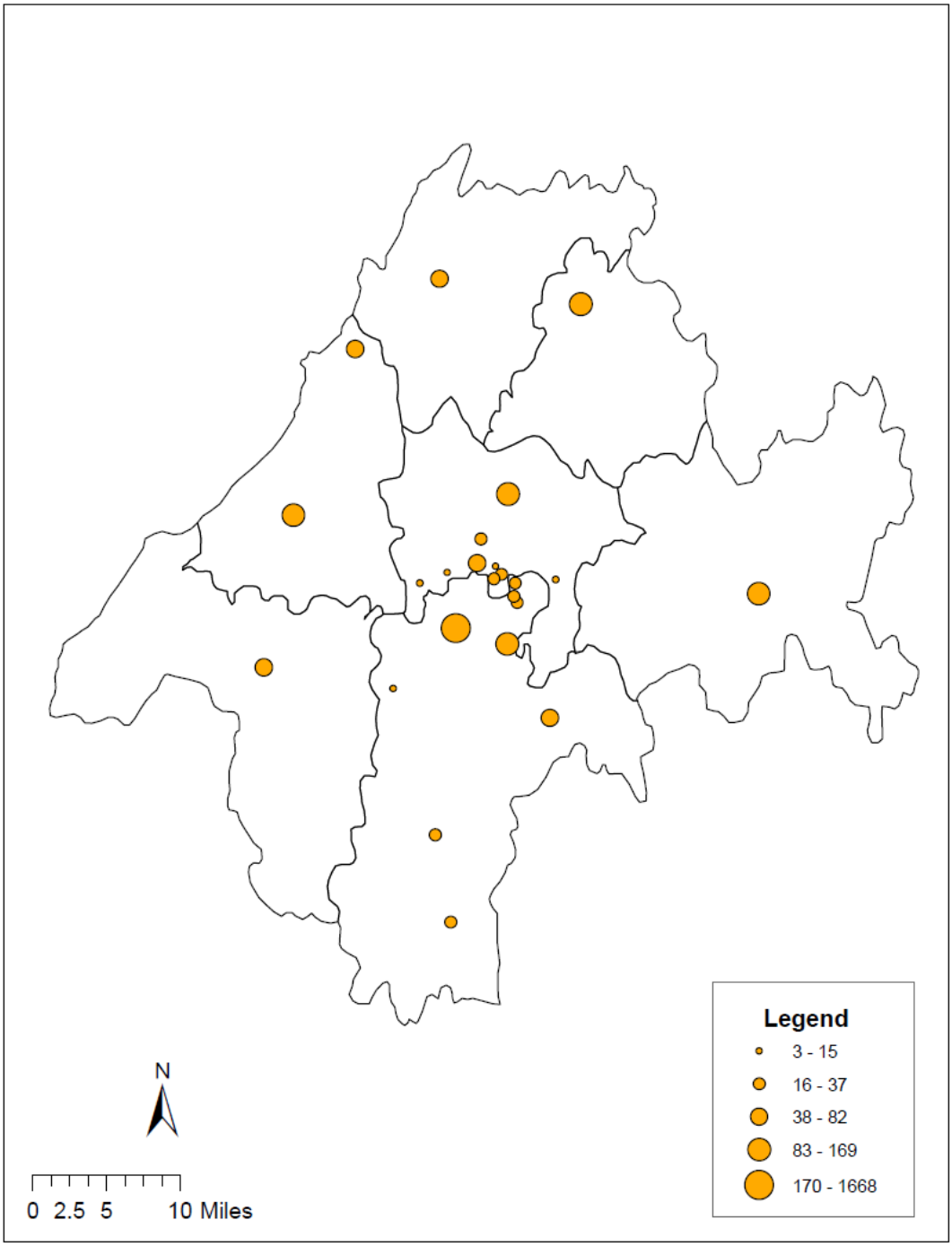
terms of population, but a small-scale manufacturing or secondary sector base strengthens them. Hence, the essence of small and medium towns as market centers is clear from this analysis.

2.5 Discussion and Concluding Remarks

This section highlights major implications of this chapter and the general notions on the characteristics of small and medium towns. As discussed in the introduction, this study explores the demographic and functional characteristics of small and medium towns. Based on the empirical urban assessment tools, it can be inferred that small and medium towns underline the diversity of economies at work, linkages between people and assets and the functional relationship in the settlements. Cities are always related to economic growth and greater productivity. However, this study brings to light that smaller settlements are not necessarily most productive but the presence of urban functions and a supporting primary and secondary economic activities increases the significance of towns in the urban settlement hierarchy.

The first important feature that can be inferred from the results of this study is that urbanization in the state of Madhya Pradesh over past decades (1961 – 2011) is mainly driven by the contribution of new towns. The urban system of the state between 2001 and 2011 experienced the highest percentage increase in the number of Class IV and V towns. The urban primacy index at the state level showed that Indore remained the largest city, but it cannot be considered as a primate city. The relative dominance of the cities lower in hierarchy has been changing and the primacy index which should be twice the size of second largest city is very low. There are two important reflections that emerges from the analysis at the state level which are related to the pattern of India's urbanization, in a larger context. First, there is no urban primacy existing at the national level mainly due to the functioning of various cities as administrative, economic and cultural centers through various historical time periods. These cities (such as Delhi, Bombay, Madras and Calcutta) continued working as dominant centers, both economic and demographic, which discouraged the development of a primate city in India.

Map 6. Centrality Index of Towns in Jabalpur District



Source: Town Directory – Madhya Pradesh 2011, Census of India

Second, currently small and medium towns of India constitute 90 percent of the Indian cities which is mainly attributed to the Census of India criterion for identifying the urban areas. These results unequivocally raise the question of development dynamism in the towns which forms an important weight in Madhya Pradesh's urban system.

The rank – size distribution of the settlements in Jabalpur district supports Zipf's hypothesis that in a settlement system the forces of diversification produces a large number of smaller settlements. These forces indicate a strong presence of primary or secondary economic activities. The location quotients (LQ) of the distribution of workers in primary and secondary sectors have been greater than 1 which shows the specialization of these economic activities in the small and medium towns of the district. It can be inferred from this point that small and medium towns have a visible economic role and are slowly transitioning from the stage of a "large village" to a small urban area. Based on the literature findings of this research study, this process of transition from rural to urban areas can be referred to as "rurbanization"[2]. The small and medium towns which have been identified as urban by the definition Census of India are actually not completely metamorphosed into urban units.

The centrality index which has been calculated based on the level of functions present and the area served by the towns suggests important inferences related to CPT. This theory is relevant to understand the processes and interactions occurring in an urban system. The provision of urban functions by large, medium and small urban settlements of Jabalpur district fits appropriately into the element of urban centers in the CPT. The spatial characteristics of these urban centers relate to the areas and population served by the service centers and their functional hierarchies. It can be argued that the spatial characteristics in turn will be helpful in identifying and delineating the complex specialization in the provision of services and in identifying the gaps in the service provision in an urban settlement system.

[2] As suggested by Roberts (2016)

This research indicates three significant features about the small and medium towns. Growth and location of the towns, primary and secondary economic basis and functions catering to the needs of the surrounding villages. It can be inferred from these features that the idea of "bottom – up planning" by taking the agropolitan[3] or rurban clusters[4] approach can be implicitly applied to develop or to strengthen the functional basis of the towns. The agropolitan approach illustrates well that rural development can be promoted by connecting urban and rural areas at the local level. Agropolitan concept aims to build agriculture – based economies in a region thereby increasing the prosperity within rural communities and serving the surrounding areas. The rurban center is a new dimension to urbanization and it is widely being used in the case of India. These centers are basically in transition from rural to urban and have the characteristics of an urban area (such as mixed land use, low income housing, piped water supply, and sanitation and drainage facilities) but contains much of the economically active population in primary and manufacturing sector. Hence, it can be inferred that in an agriculturally dominant region these rurban centers can serve as important channels for the exchange, distribution and facilities centers which will strengthen their role as agricultural economic centers and could also facilitate the development planning from below.

This research highlights theoretical, empirical and policy gaps in our understanding of small and medium towns. There is a growing body of research on "global south" urbanism that has primarily focused on large cities and their integration into the global economy and as sites of innovation, service - sector employment and high levels of amenities. Historically, geography has looked at the entirety of the settlement hierarchy from small towns to large cities. But, more recently the focus has shifted mainly towards the study of mega cities. This has come at the expense of understanding the integral role that small towns continue to play in the settlement hierarchy. This research shows that beyond their demographic significance, SMTs are also sites

[3] As suggested by Rondinelli & Ruddle (1978), John Friedman (1979) and Ertur (1984)
[4] As suggested by Roberts (2016), Bedini & Bronzini (2016), Kress (2016), Ojha (2016) and Kolhe & Dhote (2016)

of small production, functions and agricultural surpluses. This research, therefore, can help inform policies that have so far have not adequately taken into account the variations in human settlements. It will also help in revealing the methodological issues regarding the measure of urban areas and phenomena which has obscured the role of small towns.

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CHAPTER III

DECENTRALIZED URBAN GOVERNANCE: MEASURING GOVERNANCE DIMENSIONS, FUNCTIONS AND FINANCES

3.1 Introduction

Decentralization and local governance are an important aspect of urbanization. In a growing economy, urban development provides opportunities related to innovation, technology, modern facilities, incomes, employment, education and so forth (Braun, 2014). Moreover, in this era of globalization cities are more than ever becoming centers of wealth and power as well as poverty, social exclusion and marginalization of poor (Gupta, Pfeffer, Verrest and Tonen eds. 2015). When urbanization is not managed properly it can be detrimental to sustainable development (United Nations, 2016). The impacts of urbanization create patterns of interactions and interlinkages of urban areas that require wider geographical perspectives not just technology, science and data – driven approaches. Therefore, understanding urban governance and its role in management of urban areas is becoming a critical spatial development approach (Peyroux et al, 2014).

Urban governance refers to the formulation and execution of collective actions at the local level which basically includes the roles and responsibilities of the institutions (Shah, 2006). Governance is a multi – level process. It is explained as a process of interaction between the public sector and various actors or a group of actors in civil society. In general, governance describes various forms of collective decision – making which includes the state, market and civil society. The process of governance is based on a complex network of interdependent actors belonging to public, quasi – public, private and voluntary sectors (Jordan and Scout, 2006; Bovaird, 2005). An important aspect of governance is decentralization.

The purpose of decentralization is to empower local governments with a mix of developmental and governance goals (Smoke, 2017). A decentralized governance structure basically includes transfer of functions, finances, resources, structures and systems to sub - national (state, regional and local) governments to implement the goals. There are three main forms of decentralization; (i) deconcentration (establishing local units of higher level governments), (ii) devolution (creating elected local governments with autonomous powers), and (iii) delegation (essentially contracting a central function to a public or private entity). In recent decades, decentralized governance has become the center of policy making in many developing countries of the world such as Bolivia, Cambodia, Ethiopia, France, Indonesia, Japan, Peru, South Africa, South Korea, Uganda and India (Smoke, 2017; Boex and Yilmaz, 2010 and Connerley et al, 2010). The governments of these mentioned countries adopted a decentralized urban governance form mainly because of the advantages of decentralization such as improved accountability of the officials, performance of the officials linked to service delivery, citizens participation in local decision – making and policy preferences; all these advantages leading to an efficient and democratic government (Sujarwoto,2017).

However, the empirical results of decentralized urban governance have been mixed and India is no exception to it (Sujarwoto,2017). Local governance in India is a subject of state list. Under this provision, the state governments enact laws for governing the local administrations which include municipal corporations, municipalities and *nagar panchayats* (Shah, 2006). An important initiative by the Government of India to strengthen the municipal governance for urban improvement was the enactment of 74th Constitutional Amendment Act (CAA) in 1992. Before this amendment, local governments in India were organized beyond the powers or authority granted by law and the state governments were free to extend or control the functional sphere through executive decisions without an amendment to the legislative provisions. Through the 74th CAA, an attempt was made to improve the functioning and ability of the urban local bodies in India to

discharge their duties efficiently. The two major provisions[1] of this Act are 1) constitution of three type of municipalities i.e. municipal corporations, municipalities and *nagar panchayats* or the transitional areas; and 2) devolution of financial powers to the urban local bodies (India Infrastructure Report, 2006).

However, the 74th Amendment Act provisions have not yet made much of an impact especially on lower tier local bodies of India i.e. municipalities and nagar panchayats. These local bodies are confronted with problems, such as lack of people's participation in the decision-making process, poor funds and tax recovery. A review of literature revealed that a systematic impact of the constitutional provisions of this Act on the lower tier urban local bodies is still ongoing and emerging (Sharma, 2012; HUDCO, 2017; Denis, Mukhopadhayay and Zerah, 2012). Therefore, the purpose of this chapter is to study the decentralized urban governance framework in the case of the urban local bodies of towns to assess their capacities in governing, managing and financing of urban services for their local development. Hence, this chapter focuses upon three main questions: (i) what are the roles of predominant institutions and urban policies for effective planning of the towns? (ii) to what extent the urban local bodies of towns are empowered in their functioning? and (iii) how does the existing municipal finance system adequate for meeting the challenges of the urban local bodies of towns?

3.2 Literature Review: Decentralized Governance and Urban Development

A common thrust between urbanization and economic development is the unevenness and imbalance between these two across space. Urbanization gets the economic benefits from the settlement hierarchy consisting of cities, medium towns, small towns, villages and rural areas. In this hierarchy each settlement specializes in its own function and has interrelationship with others[2]. For example, large cities will grow bigger through investors and economic workforce,

[1] 74th CAA other provisions are: Adequate representation of women and weaker sections of the society, Regular conduct of municipal elections and constitution of ward committees, District planning committees, Metropolitan planning committees and State finance commissions.
[2] Ramachandran (1989)

small and medium sized towns are backbone for more specialized localized economies and serve the surrounding rural areas as well. Therefore, for the policy makers and urban institutions, it is important to understand the shifting gravity of the urban landscape in the economic development and respond to the challenges through effective planning, better management and finance (World Bank, 2009; Mckinsey Global Institute 2010).

Recent reports by international organizations such as the Asian Development Bank (2016), World Bank (2016) and Mckinsey Global Institute (2010) have addressed the fundamental deficiencies in urban governance and finance, especially in the case of Asian countries. These major deficits are mainly poor capacity of the officials, lack of planning, empowerment, accountability and transparency, funding and enhancing the resources of the local governments which makes the task of managing the cities in Asian countries challenging. The contribution of local governments in their local planning has been identified as a major driver to enhance city competitiveness[3]. Local governments despite having the authority to prepare their own budgets suffer from unclear institutional roles and functional responsibilities, lack of political engagements, weak governance structures and rigid fiscal measures. In a report[4] by ADB, in large cities greater economic opportunities are facilitated due to the presence of a dedicated implementation agency that encourages public – private investments. But, in the case of small and medium towns there is a single department which does not even have an explicit mandate to support the planning and local development.

Decentralization is defined as the transfer of authority, responsibility, and resources through devolution from the center to the lower levels of administration. In the concept of decentralization governance practices can be categorized into four forms: 1) Administrative, 2) Political, 3) Fiscal and 4) Economic. Administrative decentralization includes deconcentrating the

[3] City Competitiveness: A city competitiveness approach seeks to increase local economic productivity while balancing social and environmental objectives for sustainable growth. A more “competitive” city with increasing levels of its citizens’ disposable incomes and demand for services, should give rise to new, homegrown business opportunities that continue to fuel the economy, in addition to external investments.
[4] Asian Development Bank (2016) *Gearing up for Competitiveness: The Role of Planning, Governance and Finance in Small and Medium Sized Cities in South Asia,* Manila, Philippines.

central government structures and bureaucracies, delegation of central government authority and responsibility to semiautonomous agents of the state, and decentralized cooperation of government agencies performing similar functions through “twinning” arrangements across various tiers. Political decentralization includes organizations and procedures for increasing citizen participation in selecting political representatives and in making public policy. Fiscal decentralization includes the mechanisms for fiscal cooperation in sharing public revenues among all levels of government (national, state, regional and local), raising the revenue and expenditure allocation and fiscal autonomy at the state, regional, or local governments. Lastly, economic decentralization includes market liberalization, deregulation, privatization of state enterprises, and public-private partnerships (Cheema & Rondinellli, 2007).

In recent decades, decentralized governance has been at the center of policy making in many developing economies of the world such as Latin America, Africa and Asia. In Bolivia, the preamble of Bolivian Popular Participation states that its main goal is to improve citizen’s quality of life by effective participation of citizens in decision-making, developing democracy, satisfaction of necessities of people and fundamental socio - economic development of the country. In United Kingdom, the aim of devolution was to re – balance the power between citizen and government in order to move away from a centralized Britain to a more democratic, decentralized and plural state. In Egypt, enhancing community participation more vigorously at the grassroots level was seen as more effective and deepening decentralization. The Peruvian government views decentralization as a means to improve citizen participation in government, and a singular opportunity to confront the inequalities that have historically characterized the country’s governance and promote equal access for all in the country. According to the Cambodian government, decentralization is being pursued to strengthen and expand democracy by taking it down to the local level. It will also strengthen the democratic representation, increase people’s participation, strengthen public accountability and improve government effectiveness. Likewise, in South Africa, decentralization was an essential component of its transition from apartheid to

democracy. In Ethiopia, decentralization was aimed at giving political representation to different ethnic groups in order to help the state meet the needs and aspirations of a heterogeneous population (Faguet, 2011).

The review of decentralization literature shows that decentralization is a ubiquitous governance reform in most of the countries. However, the decentralization has not meet the expectations and this reform is considered as more diverse and complex than has been conventionally recognized by various countries as effective tool for governance. According to Smoke (2017) there are six challenges of decentralization which have made this particular form of governance difficult to operate. These include (i) diversity of institutional arrangements at various levels leads to overlapping of functions and interjurisdictional functions issues and impedes the service delivery to the citizens, (ii) the political willingness of the higher-level officials or central government to decentralize the policies which may relinquish the resources and create strife between the administration and decision – making, (iii) national bureaucratic environment includes differing opinions given impetus by political parties which may simply result into diminished role of the policy, (iv) international development assistance, it has been noticed that there has been a lack of coordination and ineffective participation between the donor agencies and the government officials of the aid – dependent countries, (v) problems of local politics, such as, poor accountability, lack of revenue generation and lack of local or citizen participation and (vi) lack of implementation of projects and programs due to bureaucratic problems and administrative, political and fiscal resources constraints.

In the urban governance, municipal finance plays an indispensable role for managing and building the urban assets. Municipal revenue and expenditure are the two most important components in the municipal finance system. The sources of municipal revenue can be classified into (i) revenues such as taxes (property tax, sales tax, automobile tax, local personal income tax), charges (user charges, utilities surcharges, fees and fines), (ii) intergovernmental transfers, and (iii) external revenues (Vitkovic et.al, 2014). The spending of municipal expenditure

ensures that the funds available to local governments are spent on improving service delivery and achieving government objectives efficiently and effectively. The expenditures of municipalities are often classified according to the departments, services and functions. However, for better understanding the major expenditure heads are divided mainly into two parts i.e. revenue account and capital account (Mathur, 2002).

Municipal finances determine efficient provision of local services to the citizenry and financing, execution, monitoring, and evaluation tool for allocating funds and responsibilities. But, there are few weaknesses of finances which mainly includes unrealistic plans and estimates, shortage of up to date information, politicized targets, and distend revenue targets leading to overspending, delayed execution, unclear items, and persistent deficits (Vitkovic et.al, 2014 and Mikesell, 2011). Much can be learned about the norms and issues of financing system from the experiences of other countries. In Mexico's revenue and expenditure management, the country was facing the challenges of low tax collection at the local level. The smaller and medium sized municipalities suffered from low institutional and administrative capacities and inefficient local tax collection. Therefore, the federal government of Mexico provided support and incentives for the state and municipalities to establish a common budget classification system along with an accounting harmonization that would enhance fiscal transparency (World Bank, Public Sector Modernization 2013).

Vietnam adopted the path of fiscal decentralization during 1990s, when the country experienced rapid urban growth. Greater autonomy on decision – making in public finances was given to the sub – national governments. However, within the decentralized administrative structure the municipalities were undertaking their own infrastructure projects and at the same time there was lack of availability of funds. This resulted in allocation inefficiency and weak links to strategic national priorities (World Bank, 2013). In Brazil, its Constitution empowered the local governments (municipalities) to boost the spending on infrastructure investment. However, the major institutional constraint was that certain urban provision rested with the private, state and

federal governments. The municipalities, therefore, faced rigidities in their budgets, constrained abilities to reallocate funds to investment (Peterson & Annez et. al, 2007). China transformed from a closed economy to a market – economy since 1978 but it lagged in its public finance and political reform. China's tax structure is far from the optimal level of efficiency and equity. The fiscal reforms in the past thirty years have not addressed the assignment of expenditure responsibilities among the central and subnational governments. The expenditure responsibilities are not compatible with their revenue capacity and intergovernmental transfer system. Moreover, the local governments have not been granted any legal mandate for fiscal measures. As a result, many local governments have turned to extrabudgetary revenue sources such as fees and surcharges, and indirect borrowing from banks to finance the infrastructure and local economic development (Man & Hong et.al, 2011). The above case studies highlight that decentralization and local autonomy is a major feature in most of the developing countries. However, the performance of decentralized system vary considerably from one country to another.

In an urban governance system fiscal, regulatory and administrative dimensions are very important. Misalignment between these dimensions disrupts the overall structure of the government and complicates the assignment of service responsibilities to different tiers of government, weakens accountability for service delivery, and creates conflicts of interest instead of balances (Ahmad et.al, 2005). The key findings from the literature review highlights that there are a number of issues which impede the governance and financial capacity of the urban local bodies. These issues are mainly, overlapping institutional roles and responsibilities, lack of capacity and know-how within local authorities, lack of coordination among the agencies, poor cost recovery, weak asset management, and weak finances.

3.3 Data Sources, Methods and Study Area

This study was conducted by collecting and collating the data on urban infrastructure (drinking water supply, sanitation, open defecation and drainage), service level benchmarks and municipal finances. The urban governance assessment was undertaken based on semi –

structured interviews with urban local bodies. The purpose of semi-structured interview in this study was to allow a focused, conversational two-way communication with the local officials. This interview provided reliable and comparable qualitative data. The questions were related to the governance dimensions of decentralized urban governance and to the extent these dimensions have been able to make an impact on the local governances.

The main data sources included; Census of India 2011 housing and house listing tables, Madhya Pradesh Municipal Corporation Act 1956, Madhya Pradesh Municipalities Act 1961, and service level benchmarks notified by the state Urban Development Department of the Government of Madhya Pradesh. The 74th amendment (sometimes called as Nagarpalika Act) has given nomenclature for three – tier urban local bodies in India: 1) Municipal Corporation for cities, 2) Municipalities for small and towns, and 3) *Nagar Panchayats* for areas in transition from a rural area to urban area

The case study area i.e. Jabalpur district lies the eastern part of the state of Madhya Pradesh. The district covers total area of 5,211 sq. km which is approximately 1.7 percent of the total state's area. Jabalpur district is divided into seven tehsils[5]: Sihora, Majholi, Patan, Shahpura, Jabalpur, Panagar and Kundam consisting of 24 towns and 1424 villages. At present, the total population of Jabalpur district is 2.46 million out of which 1.44 million population lives in urban areas. The data sets were analyzed as per the Census of India's urban nomenclature i.e. municipal corporation, municipalities and nagar panchayats.

Table 13. List of Towns in Jabalpur District by Population and Area (2011)

Towns/City	Civic status	Class - size	Population	Area (sq. kms)
Jabalpur	Municipal Corp.	I	1081677	152.53
Sihora	Municipality	III	44048	23.67

[5] A tehsil is an administrative unit term used in India which is lower in hierarchy to a district and above the city, town or village.

Panagar	Municipality	III	27932	12
Katangi	Nagar Panchayat	IV	19040	12.37
Shahpura	Nagar Panchayat	IV	13601	6.66
Majholi	Nagar Panchayat	IV	13210	6.29
Patan	Nagar Panchayat	IV	14624	13.03
Barela	Nagar Panchayat	IV	12620	9.89
Bhedaghat	Nagar Panchayat	V	6657	16.12

Source: Town Directory 2011 - Madhya Pradesh, Census of India

3.4 Results

3.4.1 Assessment of Decentralized Urban Governance Framework in Jabalpur District

The administrative, regulatory and organization set up in the state of Madhya Pradesh and Jabalpur district is according to the 74th Constitutional Amendment Act, 1992. At the national level, Ministry of Urban Development (Government of India) is the apex authority to formulate urban development policies, coordinate activities and support the urban development programs in the state. The five – year plan of India generally provides a framework for the strategies and development. The current 12th five – year plan has envisioned urbanization as the main strategy of achieving faster and inclusive growth. The plan also recognized that there is a need to focus on rural – urban linkages to understand the country's growth potential. These policies and strategies are linked with the annual plans and five – year plan at the state's level. However, Madhya Pradesh state plan only emphasized the importance of cities in the social and economic transformation of the state. At the level of urban local bodies, such strategies and policies are implemented by way of programs and projects to achieve the goals stated at the national level. Currently, the major schemes (specifically for urban development) under implementation are JnNURM (Jawaharlal Nehru National Urban Renewal Mission), UIDSSMT (Urban and Infrastructure Development Scheme for Small and Medium Towns), Smart Cities and AMRUT

(Atal Mission for Rejuvenation and Urban Transformation). Upon closely studying the schemes in the study area it was inferred that these schemes were largely infrastructure – driven with special focus on Jabalpur city and other large cities in the state. Moreover, the inclusive agenda of urban – regional development and bridging the gap between the urban and rural areas, as envisaged at the national level, was completely missing in these schemes and programs.

The role of state and local institutions is an important factor especially in the implementation of the urban development activities in the urban local bodies of towns. The functions, roles and responsibilities of the Jabalpur municipal corporation and the municipalities and nagar panchayats as per the 18 functions of the 12th schedule of the 74th Amendment Act are given in table 14 below. These functions are mainly divided into obligatory and discretionary powers.

Table 14. Functions of the Urban Local Bodies in Jabalpur District

Functions	Status of the Function	Remark
Urban planning including town planning	Discretionary	The function is being implemented by TCPO and JMC
Regulation of land-use and regulation of building activity	Obligatory	Land use regulation, building permissions, and removal of encroachments are carried out by the urban local bodies.
Planning economic and social development	Discretionary	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961
Roads and bridges	Obligatory	Public Works Department are responsible for the provision of

		roads and bridges. Urban local bodies and JDA are also responsible.
Water supply - industrial, commercial, and domestic	Obligatory	JMC, Municipalities and Nagar Panchayats
Public health, sanitation, conservancy, and solid waste management	Obligatory	Health Department currently provides sanitation and conservancy services
Fire services	Obligatory	Fire Department of provides this service and access to necessary infrastructure and personnel
Urban forestry, protection of environment, and promotion of ecological aspects	Discretionary	State Pollution Control Board implements the function
Safeguarding the interests of the weaker sections, physically handicapped, and mentally retarded	Discretionary	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961
Slum improvement and up-gradation	Discretionary	The Slum Department, JMC, is responsible for the provision of housing and other physical and social infrastructure in the ULBs.

Urban poverty alleviation	Discretionary	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961
Provision of urban amenities like parks, gardens, playgrounds, and others	Obligatory	JMC, Municipalities and Nagar Panchayats implements the function
Urban aesthetics	Discretionary	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961
Burial and Burial grounds	Obligatory	Health Department and Public Works Department of the urban local bodies are responsible
Development of cattle ponds and prevention of cruelty to animals	Discretionary	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961
Vital statistics, registration of births and Deaths	Obligatory	ULBs are responsible for the issue of birth and death certificates and maintains the record of the same as required under this function
Public amenities like street lighting, parking lots, bus shelters, public conveniences, and others	Obligatory	ULBs provide the facilities

Regulation of slaughter houses and tanneries	Obligatory	As mentioned in the MP Municipal Corporation Act 1956, MP Municipalities Act 1961

Source: MP Municipal Corporation Act 1956, MP Municipalities Act 1961, CDP Jabalpur 2041, Field Survey

It can be inferred from table 14 that the state institutions and parastatal agencies played a crucial role in delivering the urban services in the towns of Jabalpur district. However, there were major gaps in the functioning of the urban local bodies which hindered their capacity to deliver the basic urban services and managing the towns. For an in-depth understanding of the urban functions gaps, the six main dimensions of decentralized urban governance framework were measured based on the satisfaction levels of the officials of the urban local bodies of towns (refer table 15). The *overall satisfaction index* was calculated by adding up the scores for each of the governance dimensions. It was found that the officials of the urban local bodies were satisfied with the execution of the municipal functions, administrative set up and financial basis. However, the satisfaction index became lower with the delivery of services, municipal autonomy and transparency and accountability. The overall level of satisfaction was high for Jabalpur Municipal Corporation and in the case of municipalities and nagar panchayats such as Majholi (15), Barela (13) and Bhedaghat (10) there was a gradual decrease in the overall satisfaction scores. The major issues related to the lower satisfaction levels were due to the lack of knowledge and awareness among the officials of the smaller and medium urban local bodies.

3.4.2 Assessment of Basic Urban Infrastructure and Service Level Benchmarks

The overall coverage of basic infrastructure for the urban households in the state of Madhya Pradesh showed lower percentage of households having access to drinking water supply and closed drainage systems. However, the percentage of urban households covered with drinking water, sanitation and closed drainage in Jabalpur district is more than that of the state's average (table 16). The basic urban infrastructure was further detailed out into households connected with

treated water sources, untreated water sources, piped sewer network, septic tanks, sanitation facilities outside the premises (public toilets and practice of open defecation) and households with open, closed and no drainage systems.

Table 15. Dimensions of Decentralized Urban Governance

Urban Local Bodies	Governance dimensions						TOTAL SCORE (30)
	Functions (5)	*Organization set – up (5)*	*Finances (5)*	*Functional Constraints (5)*	*Municipal Autonomy (5)*	*Citizen Participation & Accountability (5)*	
Jabalpur (MC)	***5***	***5***	***5***	***5***	***4***	***5***	***29***
Sihora (M)	***5***	***4***	***3***	***2***	***2***	***1***	***17***
Panagar (M)	***5***	***4***	***3***	***2***	***2***	***1***	***17***
Shahpura (NP)	***5***	***4***	***3***	***2***	***2***	***1***	***17***
Katanagi (NP)	***5***	***3***	***3***	***2***	***2***	***1***	***16***
Patan (NP)	***5***	***3***	***3***	***2***	***2***	***1***	***16***
Majholi (NP)*	***5***	***3***	***3***	***2***	***1***	***1***	***15***
Barela (NP)*	***5***	***3***	***1***	***2***	***1***	***1***	***13***
Bhedaghat (NP)*	***5***	***1***	***1***	***2***	***1***	***1***	***11***
Overall Satisfaction Index (High to Low)	***45***	***30***	***25***	***21***	***17***	***13***	

Source: The results are based on the semi – structured interviews and discussions with the municipalities (M) and nagar panchayats (NP) conducted during the field work.
* The discussions for Majholi, Barela and Bhedaghat Nagar Panchayats were held with Mr. Pradeep Mishra, Executive Engineer at Jabalpur Development Authority (JDA) in Jabalpur.
Jabalpur (MC) = Jabalpur Municipal Corporation
Score Index: 1 = Poor, 2 = Average, 3 = Satisfied, 4 = Good & 5 = Excellent

Table 16. Coverage of Basic Urban Infrastructure

State / District	Madhya Pradesh	Jabalpur
Urban Households (HHS)	3,845,232	279,006
HHS with Access to Treated Sources of Drinking Water Supply (%)	51.83	63.32
HHS with Access to Sanitation Facilities within Premises (%)	74.22	80.15
HHS with Waste Water Outlet Connected to Closed Drainage (%)	31.91	33.78

Source: Housing and house listing tables, Madhya Pradesh, Census of India 2011

The assessment of the coverage of basic urban infrastructure in the towns showed that the percentage of urban households covered with safe drinking water, sanitation and drainage facilities was low in the towns as compared to Jabalpur Municipal Corporation. For example, Sihora, Panagar, Majholi and Bhedaghat had the lowest percentage of urban households covered with safe drinking water and sanitation facilities. An important feature of the infrastructural facilities in the study area was the practice of open defecation. The highest percentage of urban households practicing open defecation was found in nagar panchayats and municipalities. For example, Bhedaghat (70 percent), Majholi (55 percent) and Panagar (52 percent) had more than 50 percent of the urban households practicing open defecation. An important implication of the practice of open defecation is perilous environmental and human health issue.

Figure 5. Households Connected with Drinking Water Sources (%)

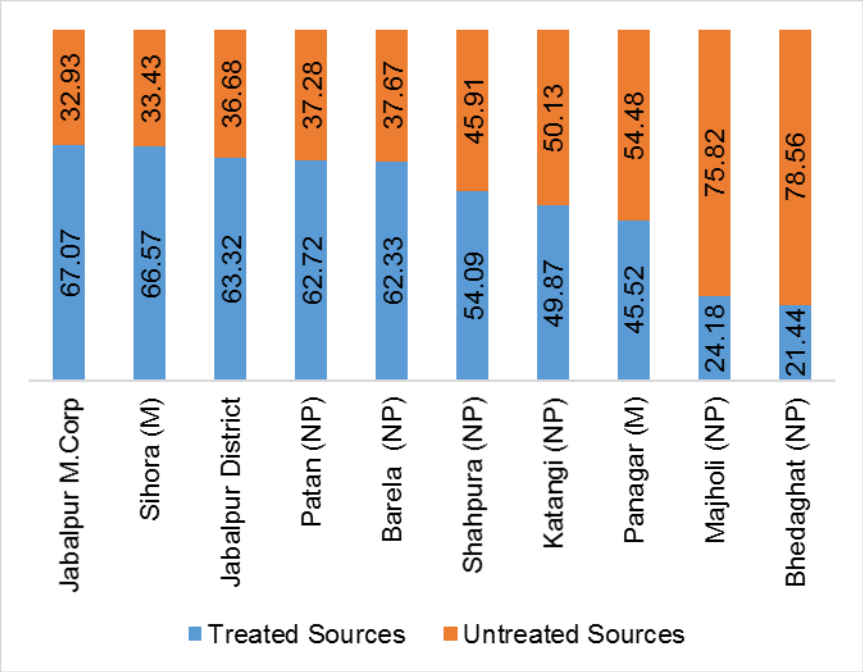


Figure 6. Households with Sanitation Facilities within Premises (%)

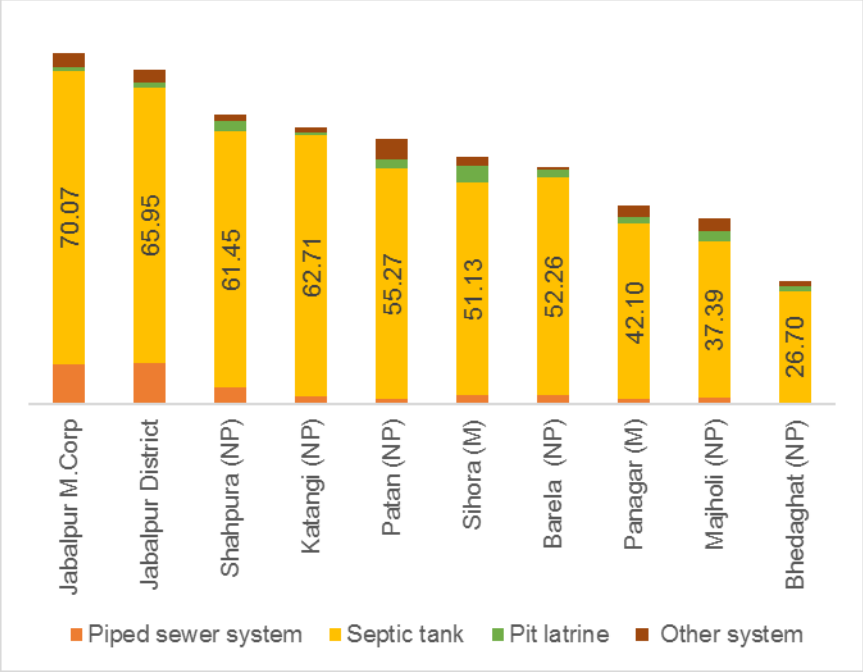


Figure 7. Households with Sanitation Facilities outside Premises (%)

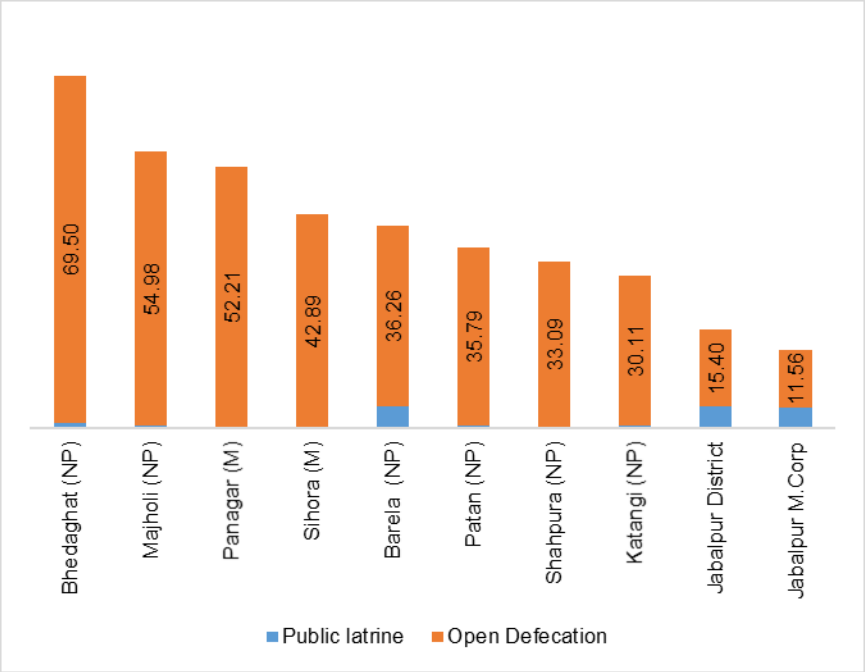
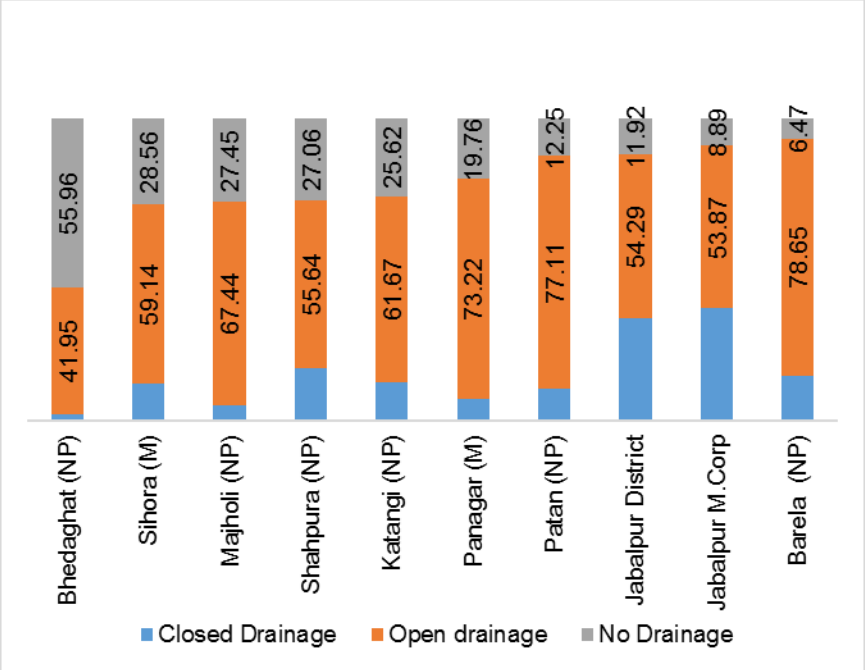


Figure 8. Households with Drainage Facilities (%)



Source: Housing and house listing tables, Madhya Pradesh, Census of India 2011

The underlying importance of urban infrastructure is related to the service level benchmarks. The significance of service levels is closely linked to the infrastructure assessment for the disbursal of the grants by the higher tiers of the government to the lower tiers. These benchmarks, indirectly, also reflects on the institutional capacity and financial performance of the urban local bodies. The Government of India has endorsed service level benchmarks in both 13th and 14th Finance Commissions (FC) in order to avail the central grants. The 13th Finance Commission recommended implementation of nine reforms[6] as a precondition to access the grants by the urban local bodies. One of these conditions included in the reforms was the notification of service level standards achieved in four main sectors (water supply, sewerage management, storm water management and solid waste management) by the end of succeeding fiscal year (March 2011 – March 2012). However, during that fiscal year this condition was applied only up to the municipal corporations and municipalities of all the states. The assessment of three sectors (water supply, sewerage management, and storm water management[7]) is shown in table 17.

Table 17. Service Level Benchmarks of Urban Local Bodies (as per 13th FC)

Indicators	**Benchmark**	*Jabalpur (MC)*	*Sihora (M)*	*Panagar (M)*
Water Supply				
Coverage of water supply connections	100%	26%	49%	26%
Per capita availability	135 lpcd	96.77	100	70

[6] Nine reforms: Introduction of a Supplement to the Budget document for local bodies and accrual based double entry accounting system in all ULBs, audit system for local bodies, Establishment of an independent local body ombudsman, Electronic transfer of local body grants provided by the 13 FC within five days of receipt from the central government, appointment of members through an Act, enabling local bodies to levy property tax, establishment of state property tax**, notification of standards or four sectors (water supply, sewerage, storm water drainage, and solid waste management) to be achieved by the end of succeeding fiscal year** and Putting in place a Fire-hazard Response and Mitigation Plan

[7] Due to unavailability of aggregated figures for the solid waste in the urban local bodies, the assessment of this indicator has been not included in the study

Metering water connections	100%	0.34%	Nil	0%
Extent of NRW	20%	43%	39%	71%
Continuity of water supply	24*7	3 hrs	2 hrs	2 hrs
Quality of water supplied	100%	97.33%	0%	0%
Redressal of customer complaints	80%	52.63%	75%	100%
Cost recovery	100%	37.58%	30.36%	17%
Efficiency in collection of water supply related charges	90%	45.92%	91%	90%
Sewage Management				
Coverage of toilets	100%	81.83%	61%	80%
Coverage of waste sewerage network services	100%	0%	nil	nil
Collection and efficiency of waste water network	100%	0%	nil	nil
Adequacy of waste water capacity	100%	0%	nil	nil
Quality of sewage management	100%	0%	nil	nil
Reuse and Recycling	20%	0%	nil	nil
Redressal of customer complaints	80%	0%	nil	100%
Cost recovery in sewage management	100%	0%	nil	nil
Collection of sewerage charges	90%	0%	nil	nil
Storm water management				
Coverage of storm water drainage network	100%	94%	82%	57%
Incidence of water logging or flooding	0%	19	4	20

Source: Service Level Benchmarks Gazette Notification (2012 - 13), Madhya Pradesh Urban and Administration Department

The 14th FC, unlike the previous commission, recommended that grants will be available to the urban local bodies upon fulfilling three main conditions: 1) submission of audited accounts, 2) increase in own revenue sources and 3) publishing of the service level benchmarks. Moreover, urban local bodies will be given scores for various service level criterion such as coverage of water supply, reduction in non – revenue water, and 24*7 water supply. The assessment of the service level benchmarks (table 17 & 18) showed that the service level indicators for which scores have been assigned by the 14th FC are, to a large extent, in compliance with the national benchmarks. For example, Jabalpur, Bhedaghat, Panagar and Shahpura have the highest percentage of the water supply connections. In the same way, the per capita availability of water all the urban local bodies are near to the standard of 135 liters per capita per day (lpcd). However, the major gap highlighted from the assessment was that the services which were not included or given any scores by the 14th FC like sewerage network, adequacy of waste water capacity, quality of sewage management, reuse and recycling and incidence of flooding, the services standards have not been achieved so far by the urban local bodies.

Table 18. Service Level Benchmarks of Urban Local Bodies (as per 14th FC)

Indicators	**Benchmark**	*Jabalpur (MC)*	*Patan (NP)*	*Sihora (M)*	*Barela (NP)*	*Katangi (NP)*	*Shahpura (NP)*	*Bhedaghat (NP)*	*Majholi (NP)*	*Panagar (M)*
Water Supply										
Coverage of water supply connections	100%	100%	88%	78%	83%	82%	90%	100%	40%	100%
Per capita availability	135 lpcd	147	135	85	105	135	119	135	99	135

Metering water connections	100%	92%	90%	nil	nil	60%	nil	nil	nil	nil
Extent of NRW	20%	20%	20%	5%	nil	6%	10%	nil	nil	20%
Continuity of water supply	24*7	24	24	2.5	24	24	n.a	24	15	24
Quality of water supplied	100%	100%	nil	92%	70%	nil	nil	nil	nil	100%
Redressal of customer complaints	80%	80%	32%	78%	76%	75%	64%	80%	64%	80%
Cost recovery	100%	100%	nil	37%	30%	nil	75%	7%	13%	100%
Efficiency in collection of water supply related charges	90%	90%	36%	83%	43%	nil	75%	6%	76%	90%
Sewage Management										
Coverage of toilets	100%	27%	72%	95%	25%	93%	93%	nil	90%	100%
Coverage of waste sewerage network services	100%	nil	nil	nil	nil	nil	nil	nil	60%	nil

Collection and efficiency of waste water network	100%	nil	nil	nil	nil	nil	nil	nil	60%	nil
Adequacy of waste water capacity	100%	nil	nil	nil	95%	nil	nil	nil	nil	nil
Quality of sewage management	100%	nil	nil	nil	nil	nil	nil	nil	nil	nil
Reuse and Recycling	20%	nil	nil	nil	nil	nil	nil	nil	nil	nil
Redressal of customer complaints	80%	nil	nil	nil	80%	60%	64%	nil	72%	nil
Cost recovery in sewage management	100%	nil	nil	nil	nil	nil	nil	nil	nil	nil
Collection of sewerage charges	90%	nil	nil	nil	nil	nil	nil	nil	nil	nil
Storm water management										
Coverage of storm water drainage network	100%	81%	25%	70%	100%	80%	88%	nil	88%	100%

Incidence of water logging or flooding	0%	nil	nil	nil	nil	nil	nil	nil	nil	nil

Source: Service Level Benchmarks Gazette Notification (2015 - 16), Madhya Pradesh Urban and Administration Department

3.4.3 Assessment of Municipal Finances

Municipal finances of the urban local bodies in India are mainly divided into: (i) Revenues (taxes, non – taxes, assignment and devolution, grants – in – aid and transfers) and (ii) Expenditures (includes establishment and administrative expenses, operation and management expenses and miscellaneous). The main sources of revenues mainly included octroi[8], property tax, tourist tax and education tax and the major expenditures included capital works. An overview of the finances aggregated for Municipal Corporation, Municipalities and Nagar Panchayats of Jabalpur district showed that there was a sharp increase in the total revenue income and expenditure of the urban local bodies between 2013 – 14 and 2016 – 17. The highest percentage increase in municipal revenue has occurred in Municipal Corporation (298%) and Nagar Panchayats (191%).

Table 19. Finances of Urban Local Bodies in Jabalpur District (Rs. Crores)

Finances	**Municipal Corporation**		**Municipalities**		**Nagar Panchayats**	
Revenue Income	2016 - 17	2013 - 14	2016 - 17	2013 - 14	2016 - 17	2013 - 14
Own – tax revenue	240.75	23.24	9.09	6.59	13.74	7.78
Own non - tax revenue	44.26	16.93	2.37	0.93	2.65	0.62

[8] Octroi is a tax levied by the state government in India when the product enters the state.

Grants – in – aid	54.86	44.72	10.25	3.29	39.01	7.27
Transfers from Central Government	25.00	0.00	1.43	0.80	2.37	0.75
Finance Commission Transfers	3.00	0.00	1.11	0.90	2.61	1.74
Other sources	36.44	16.50	9.80	2.37	11.79	6.57
Total Revenue Income	**404.31**	**101.41**	**34.05**	**14.87**	**72.17**	**24.72**
Expenditure	2016 - 17	2013 - 14	2016 - 17	2013 - 14	2016 - 17	2013 - 14
Revenue expenditure	369.69	94.10	3.26	1.81	9.19	4.19
Capital expenditure	411.53	68.46	30.74	12.52	58.52	16.36
Total Expenditure	**781.23**	**162.56**	**34.01**	**14.33**	**67.71**	**20.55**
Gross District Domestic Product (GDDP), Jabalpur	Rs. 12123.92 crores					
Own tax as % of GDDP*	1.98		0.07		0.11	
Own Revenue as % of GDDP*	2.35		0.09		0.13	
Municipal expenditure as % of GDDP*	6.44		0.28		0.55	

Source: Budget Documents 2016 – 17, Madhya Pradesh

Municipal finances also indicate the range of functions performed by urban local bodies. These functions, such as public works, distribution of electricity, water supply, slaughter houses, public toilets, and maintenance of storm water drains and so forth, generally require huge investment. However, mapping of these functions showed that the urban local bodies of the towns do not perform all the functions and are primarily occupied in delivering basic services such as electricity, roads, slaughter houses, water supply and educational activities.

Table 20. Functions Performed by Urban Local Bodies

Expenditure of services	Jabalpur (MC)	Sihora (M)	Panagar (M)	Katangi (NP)	Shahpura (NP)	Majholi (NP)	Patan (NP)	Barela (NP)	Bhedaghat (NP)
Distribution of electricity	√								
Operation of water supply services									
Maintenance of pipeline for water supply									×
Maintenance of slaughter houses									
Maintenance of office supply and stationary									
Maintenance of public toilets									
Maintenance of roads									
Libraries/Advertisement/Reading rooms									×
Maintenance of storm water drains					×			×	
Other schemes			×			×		×	
Maintenance of fire services & safety			×		×	×			×
Disease prevention & vaccination							×		×
Urban forestry							×		
Maintenance of burial grounds			×				×	×	×
Maintenance of municipal properties				×			×		
Expenditure on cultural activities & festivals						×	×	×	
Operation & maintenance of municipal schools			×			×	×	×	×
Maintenance of pools			×		×	×	×	×	×
Maintenance & construction of tube wells			×		×	×	×	×	×
Operation & maintenance of street lighting			×	×	×	×	×	×	×
Veterinary services			×	×	×	×	×	×	×

IHSDP		×	×					×	×
Maintenance of guest house / dharmshalas		×	×			×			×
UIDSSMT	×	×				×	×	×	×
Solid waste management operation		×	×			×	×	×	
Birth & death registration		×	×		×	×	×		×
Maintenance of parks, gardens & playgrounds		×	×		×	×	×	×	×
Maintenance of bridges and flyovers		×	×		×	×	×	×	×
Water treatment plants		×	×		×	×	×	×	×
Maintenance of stadiums		×		×	×	×	×	×	×
Construction of sewerage lines		×	×	×	×	×	×	×	×
Maintenance of drainage system		×	×	×	×	×	×	×	×
Removal of encroachments		×	×	×	×	×	×	×	×
Maintenance of sewerage lines		×	×	×	×	×	×	×	×
Maintenance of hospital services		×	×	×	×	×	×	×	×
Urban poverty alleviation		×	×	×	×	×	×	×	×
Police services		×	×	×	×	×	×	×	×
Slum rehabilitation		×	×	×	×	×	×	×	×
Rainwater harvesting structures		×	×	×	×	×	×	×	×
Total number of services (39)	*38*	*21*	*15*	*26*	*19*	*14*	*13*	*14*	*12*

Source: Municipal budgets

The analysis from the mapping activity indicated an important implication of decentralized governance framework in the study area that there is a hiatus between the specified 12th schedule functions of the 74th Constitutional Amendment Act and the actual functions performed by the municipalities and nagar panchayats. This hiatus included major functions; urban planning, regulation of land use, social and economic planning, improvement of weaker sections of the society, slums, urban poverty alleviation, urban aesthetics, slaughter houses, birth and death registration and provision of public amenities. It can be implied from the comparison of tables 14, 15 and 20 that the institutional responsibilities, functions and

performance of the urban local bodies of towns are not aligned properly and thus there is a need to begin take on functions related to 12th schedule for the overall development of the towns.

The analysis of the tax instruments for generating revenues in the urban local bodies showed that municipal tax jurisdiction of the urban local bodies in towns comprised largely (between 50 to 100 percent) of octroi levies followed by property tax and consolidated tax (table 21). A closer examination of the overall revenue structure across the urban local bodies (table 22) showed that there are inter – municipal differences in the usage of various revenue sources.

Table 21. Inventory of Tax Instruments in Urban Local Bodies

Taxes	Jabalpur (MC)	Sihora (M)	Panagar (M)	Katangi (NP)	Shahpura (NP)	Majholi (NP)	Patan (NP)	Barela (NP)	Bhedaghat (NP)
Animal tax									
Octroi levies									
Property tax									
Consolidated tax									
Fees on circumstances of property									
Sanitation & lighting tax									
Education tax									
Export fees									
Tourist tax									
Other taxes									
Scavenging tax									
Advertisement tax									

Source: Municipal budgets

Taxes (own revenue sources) and transfers are the two major sources of revenues for all the urban local bodies. However, municipalities and nagar panchayats are mainly dependent upon the transfers. An important inference drawn from this analysis is a contradiction when scholars mention achieving a high economic growth in small sized urban settlements as compared to large cities due to their small population size and area. It is the weak financial capacity of towns that can be related to their slow economic growth.

Table 22. Structure of Municipal Revenues across Urban Local Bodies (2016 – 17)

Urban Local Bodies	Percentage (%) Share in Per Capita Revenue				Per Capita Revenue (Rs.)
	Tax	Non - Tax	Transfers	Other Sources	
Jabalpur (MC)	59.54	10.94	20.49	9.01	3737.80
Sihora (M)	29.95	9.35	56.40	4.30	4222.66
Panagar (M)	22.78	4.08	14.89	58.25	5531.29
Katangi (NP)	20.01	6.36	64.12	9.51	7347.68
Majholi (NP)	28.18	2.73	67.73	1.36	4996.21
Barela (NP)	38.91	11.72	39.12	10.25	3787.63
Patan (NP)	12.08	0.32	47.51	40.09	10694.75
Shahpura (NP)	14.67	1.30	81.02	3.01	16388.50
Bhedaghat (NP)	23.22	7.67	35.96	33.15	13324.32

Source: Budget Documents 2016 – 17

The analysis of the expenditure included the revenue expenditure and capital expenditure spent by the urban local bodies. The analysis showed that capital works such as, public safety, water supply, water distribution, public health, road works, disease control, expenditure on

community halls/hotels/animal shelters, public works, and education include large amount of spending across all urban local bodies as compared to the revenue expenditure (table 23). In fact, the budget analysis of the urban local bodies showed that the spending (on revenue expenditure such salaries and allowances of the employees, operation and management, welfare and establishments) are negligible.

Table 23. Structure of Municipal Expenditure across Urban Local Bodies (2016 – 17)

Urban Local Body	Percentage (%) Share in Per Capita Expenditure		Per Capita Expenditure (Rs.)
	Revenue	Capital	
Jabalpur (MC)	47.32	52.68	7222.45
Sihora (M)	8.26	91.74	4221.50
Panagar (M)	11.20	88.80	5519.73
Katangi (NP)	18.73	81.27	7344.69
Majholi (NP)	11.04	88.96	4811.09
Barela (NP)	17.58	82.42	4943.52
Patan (NP)	8.45	91.55	7517.81
Shahpura (NP)	8.40	91.60	16393.94
Bhedaghat (NP)	25.15	74.85	11788.64

Source: Budget Documents 2016 – 17

Lastly, comparison between the per capita revenues and expenditures (tables 22 & 23, respectively) showed that most of the urban local bodies of towns did not had any fiscal gap in their municipal finance account (i.e per capita revenue – per capita expenditure), except for Barela and Patan. This point has an important implication regarding the proper utilization of the surplus in the developmental activities of the towns. However, the analysis indicated that that the

existing revenue potential in the urban local bodies is mainly by levying octroi and transfers from central or state. This can be partly attributed to maintain the infrastructure transfers from the high tiers of government provides them with immediate benefits of capital (infrastructure) improvement which might not always be possible by relying on the own revenue sources. Nevertheless, the urban local bodies should explore to enhance the scope of octroi and property taxes. It is also important that the urban local bodies at least try to recover on their operation and maintenance costs.

To summarize the results of this study, it can be highlighted that the 74th Constitutional Amendment Act which provided the devolution of functional and financial powers to the smaller and medium urban local bodies has made a little progress. The municipal finance system is a single – tax system, low or near zero productivity of many municipal taxes and there is also an irregularity in the state transfers. In addition, the differences in the governance functions can be attributed to the inefficiencies and poor resource basis of the urban local bodies. No performance standards are enforced on small and medium urban local bodies and it is a major lacuna in the management structure of urban local bodies of the towns.

3.5 Discussion and Concluding Remarks

The purpose of urban decentralization mandate i.e. 74th Constitutional Amendment Act, Government of India, was to fill gaps in urban governance that existed previously under a centralized management with little autonomy of the urban local bodies. The aim of the reforms under decentralization was to devolve the functional and financial responsibilities to the cities and towns, involve public participation in decision – making, greater accountability of the officials of urban local bodies and improving the capacities of the urban local bodies to meet local needs of the citizens. In this background, it was also assumed that the three – tier set up of the urban local bodies i.e. (i) Municipal Corporation, (ii) Municipalities and (iii) *Nagar Panchayats* would increase the efficiency of urban service delivery between the citizens and the officials. However, the results of this chapter have only highlighted the appealing assumptions of the Act and there are a

number of challenges that are specific to smaller and medium urban local bodies. Municipal Corporations are often inherited with stable administrations. In the case of Municipalities and *Nagar Panchayats* there is a need to build everything from scratch which means taking on new administrations possess political, institutional, technical and economic challenges.

Decentralization has tended to strengthen the local democracy by way of elections and physically embodied by building the Municipalities and *Nagar Panchayats* which houses the elected officials such as Mayor and other members. However, the indispensable services and working of these official is less evident in practice. It appears that there is lack of clarity in the roles and responsibilities of local officials. There are certain functions such as roads, bridges and water supply where there are overlapping authorities. Lack of technical capacities of the staff has led to poor organizational set up and improper administration. Despite vacant positions in the organizations, many staff members are engaged in multiple responsibilities. This has also led to the problems of poor maintenance of urban facilities such as open drainage and sewerage system, poor solid waste management and poor conditions of roads. The capacity building and training programs conducted by the higher tiers of the government are far reaching due to the lack of technical skill and knowledge of the staff of smaller and medium urban local bodies.

The issues on local participation and financial management are related to the political interference, lack of people's participation and weak financial basis. These issues were mainly highlighted through discussions with local officials of the towns. The absenteeism among the elected members (such as mayors, councilors, executive officer, engineer and other staff) of the smaller and medium urban local bodies hampers the regular functioning of the municipal offices which further causes delays in the activities of the urban local bodies. Due to the interference of the political parties in the decision-making process, the appointed authorities often work under pressure leading to frequent transfers of the employees. There is negligible accountability and public participation in the decision – making process. This is evident from the involvement of "private contractors" who avoid sharing the information on the execution of any new and ongoing

project with the local people since it is related to the local political parties which might affect their traditional stronghold on awarding of the contracts and the ruling party's economic importance. The overall analysis of the decentralized urban governance framework in the smaller and medium urban local bodies shows that there is a huge difference between the functions envisioned in the 74th Constitutional Amendment Act versus their actual implementation.

In terms of finances, the local bodies are highly dependent upon the grants and transfers from the central and state governments. Paradoxically, the financial devolution or greater fiscal autonomy to the Municipalities and *Nagar Panchayats* has fallen and stagnated. It is the property tax and octroi levies which brings maximum share of revenues to the Municipalities and *Nagar Panchayats.* Large infrastructure projects such as water supply, sewage pipelines, electricity and roads, these local bodies still rely on the higher tier governments. The argument of economic importance appears to be of little relevance in the smaller and medium urban local bodies. It is not that local people paying higher taxes for improved service provision but the local administration does not have adequate accounting expertise and lacks in efficient tax collection mechanism.

There are two important lessons that can be drawn from this chapter on smaller and medium urban local bodies in India. The first relates to the specific institutions building such as capacity development unit, staff management, public health department, water and sewerage department of the Municipalities and *Nagar Panchayats* of Jabalpur district and looking ahead of other smaller and medium local bodies in the state of Madhya Pradesh. The second highlights the need for more in – depth research into smaller and medium towns to gain better understanding of improving their governance and ensuring that they are given adequate attention which is equal to their metropolitan counterparts. This chapter rules out any normative or ideological definition of decentralized urban governance in India as no more effective and no democratic than any other. Decentralization has not carved out any space for urban development of the towns but has only complicated the institutional structures in the Municipalities and *Nagar Panchayats*. The urban

local bodies of small and medium towns are dually governed by a few political parties and Mayors. The parastatal agencies are traditionally doing their duties with little attention being given to poor conditions of the urban infrastructure in the towns. To conclude, a significant way to strengthen the smaller and medium urban local bodies is to strongly involve the state government which can revamp the political, institutional, technical and economic capabilities of the local bodies to establish these local bodies as competent administrative units.

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CHAPTER IV

UNLOCKING THE POTENTIAL OF TOWNS TO STIMULATE URBAN DEVELOPMENT

4.1 Introduction

The process of mega- urbanization has been so tremendous that as a result the efficacy of rural – urban linkages is getting less significance (Zhu, 2002). In regional geography and planning, rural –urban linkages have been at the center of research. This is mainly due to various types of flows such as population, trade, migration, capital and goods and small urban centers that supports the development of the surrounding rural region (Mayer et.al, 2016 and Tacoli, 2006).The most influential perspective in the study of rural – urban linkages has been Mcgee's *desakota* concept and *in situ* transformation of quasi – urban settlements especially adjacent to large cities (Zhu, 2002 and Parnell et. al, 2014). It has been estimated that approximately 45 percent of the urban population of the world will be living in these areas mainly adjacent to large cities by the year 2020 (Parnel et. al, 2014). However, the major issue in the development of towns and transitional urban areas is related to their blurred category; such interface is subjected to lack of urban planning, lack of regulatory and administrative control, slow economic growth, weak infrastructure and uneven urban growth. Many scholars have characterized the pattern of urban growth in the peripheral areas as splintering urbanism, backyard of the city where unwanted activities can be located such as landfills, unsustainable peripheral areas and areas of extreme poverty (Allen and Apsan, 2013; Allen, 2010; Marshall et.al 2009 and Graham and Marvin, 2001).

In contrast, many scholars such as, Robinson (2002), Bunnell and Maringanti (2010), Roy (2011), Parnell et.al (2014), Maheshwari et.al (2016), Gordon (2017) and Detter and Fölster (eds.) (2017) suggested small towns and transitional urban areas for coherence and

sustainability. They argued that small towns and peri - urban areas do not fall under the urban dynamism because they are atypical in their social and economic configuration. Still, these are potential urban growth areas to absorb the future expansion. The perspective on the coherence and sustainability of the towns is thought provoking as it immediately raises the question that whether the development of towns should occur in conventional urban way or those aspects which have abilities to grow and sustain local economic and social resource bases of the towns should be considered in the development of towns (Gordon, 2017 and Detter and Fölster (eds.) 2017). Unlike concepts like urban livability, smart growth and inclusiveness, the development of towns has been explained based upon tourism, migration, small and medium enterprises and at a large as peripheral area development (Donaldson et.al, 2012; Qian et.al, 2012; Courtney et.al, 2007; Wirth et.al, 2016 and Noronha and Vaz, 2015).

Recently, a new approach on empowering the urban areas has been put forward which is mainly based upon infrastructure development and municipal asset management. The main emphasis of this approach is to invest in infrastructure that will have significant implication in production of goods and services and thus raising the productivity (ADB, 2017). Moreover, infrastructure is the cornerstone for socioeconomic progress and to accelerate growth and productivity there is a need to bring changes in infrastructure governance, delivery, financing and management that should maximize the coverage in the citizens and reduce gaps in services (UN – ESCAP, 2018). This chapter acknowledges the importance of development of towns based on their local economic, social and infrastructure basis and therefore, attempts to rank the towns and identify the potentials of towns by measuring their urban development index (UDI). This urban development index is not a rigid blueprint, but it represents a simple framework consisting of factors which have a direct implication on the development of towns. The factors included in the index are; (i) level of urban growth, (ii) economy, (iii) physical and social infrastructure, and (iv) human assets. The main implication of UDI is to enable the urban local bodies of towns and their

stakeholders to identify area of opportunities and potential areas of intervention for towns to become prosperous (UN – HABITAT, 2015).

Therefore, the purpose of this chapter is to rank the towns based on UDI and present a snapshot of challenges and opportunities and what will likely be needed for the development of towns. There are few important questions which forms the core of this chapter; how do we understand the distinctiveness of towns and large cities? How do the assets for potential development in towns differ from those of large cities? What are the perspectives or new visions that can be framed for towns and offer a fresh approach for their development? And finally, what are the major drivers for stimulating the growth and development of towns? Overall, this chapter describes that small and medium towns are potential growth areas to leverage urban development. Unlike urban development in cities, the focus should be on the needs, challenges and opportunities existing in towns. (Wu et. al, 2018; Detter and Fölster (eds.) 2017; World Bank, 2016; Scrase et. al, 2015 and Courtney et. al, 2007).

4.2 Literature Review: City Development Indexes and Ranking

There are various indexes and measures related to urban development and cities. These indexes are a combination of various indicators (World Cities Report, 2016). In this review, a brief overview of the indexes developed and conceptualized by organizations such as UN – HABITAT, World Bank, Mckinsey Global Institute and Asian Development Bank has been given where the indexes were used to rank the cities. The United Nations *Sustainable Development Goals* have gained significance that have recently formulated in the year 2016. The SDGs consists of 17 goals which applies to all the countries and aims to mobilize efforts to end poverty, inequalities and climate change. To fulfill this aim, one of the goal of the SDGs is to make cities inclusive, safe, resilient and sustainable by enhancing capacity for participatory, integrated and sustainable human settlement planning and management and supporting economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning (Sachs, 2012). Most of the indexes prepared so far have embraced the

goals of SDGs and the indicators selected are basically taken as a measurement of progress towards SDGs.

The UN – Habitat II introduced the city development index (CDI) to rank cities according to their level of development. This index used total expenditure on urban services and infrastructure which included – gross domestic product at city level, infrastructure, waste, health and education. The CDI was indicated as a good index for measuring urban poverty and urban governance mainly because health, education and infrastructure components were good variables for measuring poverty outcomes and infrastructure, waste and gross domestic product at city level were key variables for measuring the effectiveness of governance in cities. Cities performed better or worse on the CDI scale relative to their city product i.e. higher investment in physical and social infrastructures will receive higher shares (http://www.un.org/ga/Istanbul+5/116.pdf).

The UN-Habitat has recently introduced an index for measuring a city's prosperity and called it as the City Prosperity Initiative (CPI). The index is an outcome of global initiatives with inputs form mayors and officials on enabling the cities to identify opportunities and potential areas of intervention. This index is composed of six main dimensions: productivity, infrastructure, quality of life, equity and inclusion, environmental sustainability and governance and legislation and each of these dimensions is composed of sub-dimensions which are defined from a group of variables (or indicators) that are measured for each city. The composite index prepared from these indicators acted as tool for policy making and is used to measure the progress and deficiencies in the context of city prosperity (UN – Habitat, 2015). The set of indicators are shown in the table below:

Table 24. City Prosperity Initiative

Dimensions	Indicators
Prosperity	City product per capita, Unemployment rate
Infrastructure	Housing and social infrastructure; internet access; traffic fatalities
Quality of life	Life expectancy at birth; Under-five mortality rate; Literacy rate; Mean years of schooling; Homicide rate
Equity & social inclusion	Poverty rate; Slum households; Youth unemployment; Equitable secondary school enrolment
Environmental sustainability	Air quality; Waste water treatment; Share of renewal energy; CO2 emissions
Governance & legislation	Participation and institutional capacity

Source: UN-Habitat, 2015; City Prosperity Index.

The World Bank has introduced Urban Sustainability Framework (USF). The framework basically enables cities to leverage financing towards urban resilience and sustainability agendas and in particular to work toward the United Nations Sustainable Development Goal 11—making cities inclusive, safe, resilient, and sustainable. The USF has six key outcome dimensions; governance and integrated planning, fiscal sustainability, economic competitiveness, environment and resource efficiency, low carbon and resilience, and social inclusiveness. Moreover, to measure these sustainability dimensions, the USF involves a four – stage approach of integrated planning: diagnosis (enables cities to respond to emerging trends, events, challenges, and opportunities), vision and priorities for action, financing and monitoring framework (Urban sustainability framework, World Bank, 2018). The outcome dimensions with their set of indicators is given in the table below:

Table 25. Urban Sustainability Framework

Dimensions	Indicators
Governance & integrated urban planning	Achieve integrated, well-planned urban development
Fiscal sustainability	Ensure accountable governance and fiscal sustainability
Urban economies	Attain sustainable economic growth, prosperity, and competitiveness across all parts of the city
Natural environment & resources	Protect and conserve ecosystems and natural resources into perpetuity
Climate action & resilience	Work toward mitigating greenhouse gas emissions while fostering the overall resilience of cities
Inclusivity & quality of life	Work toward creating inclusive cities and improving cities' livability, focusing on reducing poverty levels and inequality throughout cities

Source: World Bank, 2018, Urban Sustainability Framework

Another important framework introduced by World Bank was a methodological guidebook designed to facilitate a dialogue among city stakeholders and officials such as civil societies, governments and private sector and make them understand about the unprecedented risks in urban development occurring due to climate change and natural disasters. This framework is called as City Strength Diagnostic framework. It basically helps in identifying the priority areas for actions and investments required to enhance a city's resilience to both natural and human risks. This framework is a qualitative assessment which involves significant stakeholder from their field of specialization and the institutions involved in city management. The essence of this framework is that it encourages cross-sectoral collaborations through workshops, interviews and filed visits and identify projects that can be implemented. The urban development framework in this

guidebook involves twenty – two guiding questions which are related to institutional capacity, regulations, planning, vulnerability, asset management, informality, housing and cultural heritage (City Strength Diagnostic, World Bank, 2015).

In a report by Mckinsey Global Institute (2016) it was estimated that by the year 2030 the world economies will need to invest 3.3 trillion US dollars in infrastructure (transport, power, telecom and water) to support their growth. It is estimated that a gap of 120 trillion US dollars is required to be filled by 2030. The report does not give any index for measuring or ranking cities but it had suggested various channels for increasing the revenue basis, project development and investment options for fulfilling the infrastructure investment gap. The report clearly indicated that the governments could increase the funding by diversifying their revenue collection basis such as user charges, property values and taxes, and selling existing assets for new infrastructure (MGI, 2016). In another report by Mckinsey Global Institute (2011), the research builds on mapping the economic role of cities. The database was collected for around 100 cities and the cities were ranked as per their gross domestic product. The database included the population number, per capita GDP and GDP growth rate, average household size, number of households and household income. The gross domestic products of various cities indicated that rising per capita GDP is the largest factor for urban growth since it is mainly driven by agglomeration benefits of the economies of large cities and their capacity to attract higher investments and talented workers (MGI, 2011).

In a paper on urban sustainability, Reddy and Tiwari (2016) developed a city performance index (CPI) to measure and evaluate the urban regions in terms of sustainable performance. The paper showed the ranking of the twenty – five large cities in India based on four dimensions; economic, environmental, social and institutional. These dimensions were further divided into twelve categories and ultimately fifty – three indicators. The purpose of developing the index was to measure the performance of cities and to understand the positive

and negative characteristics of the cities and prepare plans for sustainable urban development. The dimensions along with few indicators is given in the table below:

Table 26. City Performance Index

Dimensions	Indicators
Economic	Consumer price, per capita water and electricity consumption, households with access to internet, telephones, mobile phones, households using banking facilities.
Social	City population, population density, population growth, sex ratio, population below poverty line, number of slums, colleges per 1,000 population, schools per 1,000 population, number of hospitals, infant mortality rate.
Environment	CO2 emission, SO2 emissions, SPM levels
Institutional	Banks, financial management, staffing pattern, voters turnout, transparency & accountability

Source: Reddy and Tiwari, 2016.

The review throws up a wide choice and range of indicators for assessing the potentials of towns which relate to the overall economic growth, urban development, governance, hard and soft infrastructure, human assets and municipal finance conditions. The set of indicators used has made in making a choice of indicators for ranking the towns that form the focus of this study.

4.2.1 Urban Development Index Framework for the Study

The framework for urban development index (UDI) for this study has been drawn partially from the literature review, as given above. However, the main precept of UDI is to target the goal on inclusive, safe, resilient and sustainable cities of the SDGs so that the potential benefits of towns can be identified and they can be pushed at the national and regional developmental planning framework. The urban development index is taken as a composite index and an outcome of interactions of five dimensions i.e. urbanization, economic development, physical

infrastructure, social infrastructure and human assets. Each of these dimensions has been represented by a host of indicators for identifying the opportunities and challenges of towns.

Table 27. Dimensions and Indicators for Urban Development Index

Dimensions	Indicators	Remarks
Urbanization	• Compound annual growth rate of towns (2001 – 11) • Town population as a percentage of district's urban population (2011) • Urban population density (2011) • Change in urban area (2001 – 11) • Percentage of urban poor to the total urban population (2011) • Percentage of slum households to total urban households (2011)	The concept of urbanization was taken as a measure of growth and development. There were six indicators used for measuring the urbanization index. In this, the growth rates, town population, density and change in urban area are the growth factors that indicated the urban footprint of the towns. Slums and urban poor indicated the rate of informality in the towns.
Economic development	• Urban workforce as a percentage of total urban population (2011) • Main workers as a percentage of total urban workforce (2011) • Urban female workforce as a percentage of total urban workforce (2011) • Non – workers as a percentage of total urban work force (2011)	The economic development was calculated by taken two sets of indicators. The first one was the employment structure in the towns and the second one was related to the share of municipal revenues and expenditures. The employment structure mainly indicated workers and non –

	• Taxes as a percentage share of total municipal revenue • Non – taxes as a percentage share of total municipal revenue • Grants as a percentage share of total municipal revenue • State and Central transfers as a percentage share of total municipal revenue • Other sources of revenue as a percentage share of total municipal revenue • Revenue expenditure as a percentage share of total municipal expenditure • Capital expenditure as a percentage share of total municipal expenditure	workers which showed the job concentration in the towns. The pattern of municipal revenues and expenditure indicated the financial state of the urban local bodies of the towns.
Physical infrastructure	• Percentage of urban households with access to treated tap water (2011) • Percentage of urban households with access to electricity (2011) • Percentage of urban households with latrines connected to piped sewer system (2011) • Percentage of urban households with latrines connected to septic tanks (2011)	The physical infrastructure included the indicators on coverage of basic water, sanitation, electricity and drainage coverage and road network of the towns. The social infrastructure included presence of basic urban services in the towns. In this study, the role of infrastructure

	• Percentage of urban households with waste water connected to closed drainage system (2011) • Percentage of urban households with open drainage system (2011) • Percentage of urban households with no drainage system (2011) • Total length of metaled roads (sq. kms) • Total length of unmetalled roads (sq. kms) • Percentage of urban households having cars / scooters / bicycles (2011)	was crucial since it is a tool to stimulate urban growth, investments and economic development.
Social infrastructure	• Total number of hospitals • Total number of health centers • Total number of schools • Total number of colleges and universities • Total number of recreational facilities • Total number of banks	
Human assets	• Percentage of urban literates to total urban population (2011) • Percentage of urban male literate population (2011) • Percentage of urban female literate population (2011)	Human assets were represented by literacy indicators in the towns. Literacy was taken as a critical factor for representing the socio – economic development of towns.

	• Compound annual growth rate of urban female literates (2001 – 11) • Compound annual growth rate of urban literates (2001 – 11)	

The 38 indicators representing five dimensions were used to construct the urban development index for the eight towns of Jabalpur district. The towns were first given ranks against each of the five dimensions and then were combined into one index called as urban development index. The ranking of towns helped in understanding the gaps that existed between top – ranked and low – ranked towns. This also guided in identifying the characteristics for high – ranking towns, low – ranking towns and large cities. This exercise was complemented by bi-variate correlation and linear regression exercise in order to further understand the relative roles of the five dimensions in the urban development index of the towns.

4.3 Urban Development Index for Towns in Jabalpur

The Census of India outlines the urban areas into six main categories based on population sizes; Class I (100,000 & above), Class II (50,000 – 99,999), Class III (20,000 – 49,999), Class IV (10,000 – 19,999), Class V (5,000 – 9,999) and Class VI (5,000). In this classification, Class I category is considered as cities and from Class II to VI are generally classified as “towns”. Large concentration of population in the cities has become a remarkable feature of India’s urbanization. It is estimated that around 70 percent of the urban population of India resides in 468 cities (Class I) and remaining 30 percent is spread in 5,705 towns (Class II – VI). Despite this fact, noticeable structural transformation had occurred in towns during the last decade. Estimations on work participation rate and employment pattern across the towns showed that the work participation rate had increased from 32.5 percent to 35 percent between 2001 and 2011 and the percentage share of workers in secondary and tertiary sector has also increased (HUDCO, 2017 and Census of India, 2011).

In the case of the towns in Jabalpur district, the percentage share of workers in the three sectors; primary, secondary and tertiary, showed an increase in the percentage share of primary and tertiary sector workers and a decline in secondary sector workers. The percentage share of primary workers increased from 3.10 to 5.28 percent between 2011 and 2011. The secondary sector experienced a decline in the percentage share of workers from 10.30 to 7.71 percent during the same period. The tertiary sector which forms the largest share of percentage of workers among the three, experienced a marginal increase in the percentage of share of workers between 2011 and 2011 from 86 to 87 percent only. Given this employment pattern, it is noteworthy that there are two major issues regarding the development of towns' i.e. economic growth and infrastructure which means that the effects of growth in employment will lead to concentration of public services and urban amenities. The construction of urban development index based on the importance of employment and infrastructure for towns certainly indicate towards the strengths and inclusiveness of towns. The first step in the construction of index was to standardized the indicators under each of the five dimensions i.e. urbanization, economic development, physical infrastructure, social infrastructure and human assets. In this step, the z-scores were calculated for each of the indicators to find out the deviations of the indicators from their mean (Annexure 4.7). Then, to get the index of each of the dimension the average of the z – scores were taken. The average index for the various dimensions of the towns is given in table 28 below.

Table 28. Average Index (based on Z – scores) of the Dimensions

Dimensions	Urbanization	Economic Development	Physical Infrastructure	Social Infrastructure	Human Assets
Sihora (M)	1.07	0.61	0.19	1.34	0.44
Panagar (M)	0.4	0.21	-0.18	0.05	0.23
Shahpura (NP)	-0.24	-0.39	0.55	-0.11	0.19
Katangi (NP)	-0.35	0.18	-0.18	0.18	-0.67

Patan (NP)	-0.48	-0.34	0.04	0.29	-0.22
Majholi (NP)	-0.25	-0.09	-0.34	0	-0.43
Barela (NP)	-0.35	0.15	0.55	-0.65	0.18
Bhedaghat (NP)	0.17	-0.33	-0.64	-1.11	0.28

Source: Computation based on Descriptive statistics and Z –scores.

The average index scores of the towns had been inconsistent across the dimensions. Sihora had a high index overall apart from physical infrastructure. Panagar municipality which is second largest after Sihora, had a low index for physical and social infrastructure. Bhedaghat nagar panchayat which is the smallest urban local body among the towns had a high index in terms of urbanization and human assets. The indexes of towns showed a contrary to the fact that the urban infrastructure and economic growth improves with the increase in city size. These towns were arranged in decreasing order of their administrative status. However, the indexes of the towns varied as we moved up the population size.

An important analysis complementing the average index of towns was the correlation amongst the dimensions. It was examined that urbanization was strongly correlated with economic development, human assets and social infrastructure. Besides, between economic development was also strongly correlated with social infrastructure and human assets. Physical infrastructure had a negative correlation with urbanization and a weak correlation with economic development and social infrastructure.

Table 29. Correlations between the Dimensions

		Urbanization	Economic development	Human assets	Physical infrastructure	Social infrastructure
Urbanization	Pearson Correlation	1	.657	.659	-.112	.501

	Sig. (2-tailed)		.077	.075	.791	.206
	N	8	8	8	8	8
Economic development	Pearson Correlation	.657	1	.177	.138	.613
	Sig. (2-tailed)	.077		.674	.744	.106
	N	8	8	8	8	8
Human assets	Pearson Correlation	.659	.177	1	.282	-.016
	Sig. (2-tailed)	.075	.674		.499	.969
	N	8	8	8	8	8
Physical infrastructure	Pearson Correlation	-.112	.138	.282	1	.246
	Sig. (2-tailed)	.791	.744	.499		.557
	N	8	8	8	8	8
Social infrastructure	Pearson Correlation	.501	.613	-.016	.246	1
	Sig. (2-tailed)	.206	.106	.969	.557	
	N	8	8	8	8	8

Source: Computed from bi – variate correlations

The correlations established only the degree of relationship that existed between the dimensions. The overall ranking (urban development index) for the towns was done based on the principal component analysis. We have already seen the standardized values (table 28) and the degree of correlation that existed between the dimensions (table 29). *The only limitation of this analysis was that the level of significance did not come out well and therefore, we failed to reject the null hypothesis i.e. the data did not provide convincing evidence among the dimensions. Still, the purpose of undertaking this analysis in detail was to understand the significance of towns as potential areas in urban development*. Hence, the detailed statistics based on the PCA procedure was carried out and the results are shown in the following graphs.

Figure 9. Scree Plot showing the Components

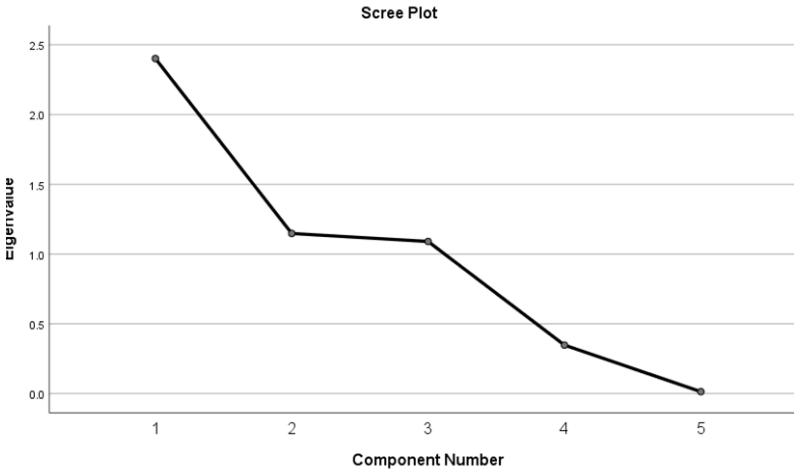

Table 30. Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.402	48.030	48.030	2.402	48.030	48.030
2	1.148	22.951	70.982	1.148	22.951	70.982
3	1.090	21.801	92.783	1.090	21.801	92.783
4	.347	6.943	99.726			
5	.014	.274	100.000			

Table 31. Communalities

	Initial	Extraction
Urbanization	1.000	.985
Economic development	1.000	.803
Human assets	1.000	.993
Infrastructure (physical)	1.000	.995
Infrastructure (social)	1.000	.863

Extraction Method: Principal Component Analysis.

Table 32. Component Matrix[a]

	Component		
	1	2	3
Urbanization	.895		-.395
Economic development	.832	-.332	
Infrastructure (social)	.722	-.542	
Human assets	.568	.817	
Infrastructure (physical)			.940

Extraction Method: Principal Component Analysis.[a]
a. 3 components extracted.

Table 33. Rotated Component Matrix[a]

	Component		
	1	2	3
Infrastructure (social)	.909		
Economic development	.868		
Human assets		.975	
Urbanization	.618	.738	
Infrastructure (physical)			.988

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 5 iterations.

In the PCA, to determine the number of components to be extracted, the “eigenvalue” greater than one is the main criteria and the scree plot (as shown in the preceding PCA tables and figures) helps in graphically depicting the number of factors extracted (Friesen et al., 2016). In this analysis, there were three components that had eigenvalue greater than 1. The first component had approximately 48 percent of the total variance of the variables, second component had 22 percent and the third component had 21 percent. The first component explains the largest possible variation in the original data, the second component explains additional but less of the sample variation than the first component. Additional components progressively capture less of the subject being investigated (Pozdena, 2011). In this analysis, the varimax method was used which includes the “rotated components” for interpreting the results. In this method, each factor has a small number of large loadings and many smaller loadings. This simplifies the interpretation because after rotation each original variable tends to be associated with one (or a small number) of factors, and each factor represents only a small number of variables. Moreover, the factors can be interpreted from the opposition of few variables with positive loadings to few variables with negative loadings (Abdi, 2003).

From the “rotated component matrix”, there were three components that were used for the final ranking of the towns. The first component was highly correlated to social infrastructure, economic development and urbanization. The second component showed a strong relation with human assets and urbanization. The third component was mainly related to physical infrastructure. Based on the analysis, the first component was grouped as urban – socioeconomic index, the second component represented urban – human asset index and the third represented the physical infrastructure index. The ranks of the towns based on the three indexes are given in the table below:

Table 34. Rank of the Towns Based on Urban Development Index

Towns	Population	FAC1_1*	Ranks	FAC2_1*	Ranks	FAC3_1*	Ranks
Sihora (M)	44,048	1.94008	1	1.13471	1	1.39027	4
Panagar (M)	27,932	0.33547	3	1.03776	3	1.28287	6
Shahpura (NP)	13,601	-0.78674	7	0.69825	5	0.34964	1
Katangi (NP)	19,040	0.61474	2	0.26480	8	0.17546	5
Patan (NP)	14,624	-0.28444	5	0.21798	6	-0.43444	3
Majholi (NP)	13,210	0.03739	4	-0.84759	7	-0.52153	7
Barela (NP)	12,620	-0.52756	6	-0.95961	4	-0.73788	2
Bhedaghat (NP)	6,657	-1.32894	8	-1.54630	2	-1.50438	8

Source: Computation based on PCA in SPSS.
FAC1_1* = urban – socioeconomic index, FAC2_1* = Urban – human development index, FAC3_1* = Physical infrastructure index

The ranks based on the PCA were not the same across the three components. Sihora is the largest municipality in Jabalpur district was ranked first for urban – socioeconomic and human development index and was ranked fourth in physical infrastructure index. Panagar is the second largest municipality had a lower rank in physical infrastructure. Bhedaghat is the smallest nagar panchayat had second rank in urban – human assets index. The ranks based on the three

indexes were inconsistent across the towns. It can be implied from the inter – town differentials that there are significant differences in the relative capacity of the towns. The capacity of the towns to become potential centers for urban development, this being the focus of the study, the strengths and weaknesses of the towns and the gaps that existed between them are now discussed in detail in the next section.

4.4 Potential of Towns to Stimulate Urban Development

A framework for stimulating the potential of the towns provides an empirical understanding of the interplay between urbanization and socioeconomic - human assets factors of Jabalpur district's towns. For this purpose, a three – step methodology was followed. The first step included the strength, weakness, opportunities and threat (SWOT) analysis of the towns. In the second step potential areas of interventions were identified for the development of towns. Finally, in the third step policy directions for integrating town into the urban development policy framework were mentioned. The three – step methodology showing the detailed assessment is given in the table 35.

The SWOT analysis applied to the study of towns showed that weaknesses exceeded the strengths of the towns. As strengths of the towns, it was observed that location, economic bases and literate population were the key developmental features of the towns. There is a good coverage of road network in Jabalpur district. Major national highways like NH – 7, NH – 12 AND NH – 12 which connects Jabalpur to other important cities like Jaipur, Varanasi and Kanyakumari, passes through all the towns. The major economic base of the towns in Jabalpur district is that of *bidi* rolling (tobacco filled thin cigar) household industry. It was found that Sihora, Panagar, Katangi and Majholi were the major towns specializing in bidi rolling industries (City Development Plans). However, the missing part of this economic base was the revenue generated by the bidi industry and the workforce engaged in the industry. Location and road connectivity provides a strong interconnected network to urban areas, reduces economic disparities thereby bringing in more economic opportunities and structural changes in the economy (Chen and Vickerman,

2017). The relationship between the three features, connectivity, economy and literacy, is interconnected and can also have widespread developmental impacts on towns. Investing in the economic resources can attract and retain the workforce and will increase the tax sources. This in turn helps in productive use of infrastructure and creating more job opportunities (USEPA, 2015).

The weaknesses and threats were the negative factors detrimental to the development of towns. The main weaknesses observed across the towns was unemployment, lack of clean water supply, unsafe sanitation, lack of drainage facilities and poor own - tax resources of the urban local bodies. It was found that more than 80 percent of the tax revenue for the urban local bodies came from octroi fees. Apart from this, grants disbursed by the central and state governments were mainly utilized for physical infrastructure works and maintenance. However, the town's urban local bodies are limited in their infrastructure financing and tools due to significantly less proportion of the funding. This is mainly because the devolution of grants and funds do not sufficiently match with the requirements of the local authorities or bodies. As a result, maintenance and investment in infrastructure becomes a fiscal stress for the urban local bodies (DuPuis and McFarland, 2016). The major threats in the development of towns were mainly found to be related to the physical development and environmental degradation. At present, the settlement pattern in all the towns is mainly nucleated and scattered with few pockets of agricultural land. This pattern might lead to annexation and conversion of lands by the development authorities for the future expansions of the towns. Environmental degradation had mainly occurred due to the lack of water supply, sanitation and drainage infrastructure coverage. Based on the evaluation of threats and weakness, it can be pointed that costing and financial viability of infrastructure are very important in the development of towns (Wei et.al, 2015).

There are a few opportunities that existed within the towns in Jabalpur district. The towns mainly acted as district administrative centers, weekly market centers and have a few places of historical, religious and nature significance. These opportunities can be manifested in the form of additional strengths of the towns. The presence of bidi industry, agro – based industries and high

literate population can empower towns like Sihora, Panagar, Shahpura, Katangi and Patan as *regional or district trading hubs* for the household industries commodities. Moreover, upgradation of infrastructure such as computerized records, commercial complexes, modern machinery installations, training centers, financial institutions can create more job opportunities and strengthen daily economic activities of these centers.

This can also strengthen the rural – urban linkages; as the towns upgrade they will attract nearby rural population for better economic opportunities and provision of modern facilities. There are few towns like Barela, Patan, Shahpura and Panagar which are located near to Jabalpur city can be proposed as satellite towns for absorbing the future population growth of Jabalpur city. It was observed that there are several Hindu and Jain temples which are more than thousand-year-old present in and around the towns. On auspicious occasions these temples are visited by devotees from all over the state of Madhya Pradesh as well as Jabalpur district. These places can be considered as potential tourism spots and ancillary tourism related activities such as rest houses, cafeterias, public facilities, small souvenir shops can be set up which can boost employment opportunities in the towns.

The second step of the methodology in this section outlines a framework for action to leverage the potential of towns in Jabalpur district. Given the importance of urbanization in the towns of Jabalpur, there is a need to formulate priority areas which can empower these towns socially and economically sound. In order to achieve this, a vision statement for the towns of Jabalpur was formulated. This vision was also aligned with the priority areas of intervention for the development of towns. Each priority area consisted of short – term actions that can unlock the potential of towns in Jabalpur (table 35). The main priority areas were; (i) to promote sustainable social and economic development, (ii) to promote the development of human assets and skills and (iii) to promote efficient and equitable distribution of infrastructure.

The final step in the methodology included the policy directions for integrating towns into India's urban development framework (table 35). There are presently nine major schemes and

programs ongoing in major cities of India. Under these programs, Smart Cities Mission (covering 100 cities), AMRUT (covers 500 cities with more than 100,000 population) and Swachch Bharat Mission (cover 4,041 statutory urban areas) are the significant programs. In this given list, there is not a single town (population between 5,000 and 99,999) covered by any of the program.

Table 35. Identification of the Potential Areas and Policy Direction for Development of Towns

Step 1: S.W.O.T analysis of towns				
Towns	Strengths	Weaknesses	Opportunities	Threats
Sihora	• Strategic location of the town as connected major national highway and railways. It is also the *tehsil* headquarter. • Major household industry is *bidi* (tobacco filled thin – cigar) and *poha* (flattened rice flakes) manufacturing. • High percentage of literate population. • Extremely low poor (slum) population	• High percentage of non – workers • Problem of open drainage that poses major health and environmental hazard. • Lack of own – revenue generation sources. The municipality is mainly dependent upon octroi and grants through state and central government.	• Historic town with religious tourism potential. • Bidi industry expansion can support small agricultural based industries. • Jobs can be generated based on tourism and agriculture-based industries. • Taxes on tourism, sanitation and sewerage services can add to the municipal revenue. • Infrastructure can be developed and strengthened the town as *tehsil* headquarter.	• Small geographical area with high population density • Nearby agricultural areas can be potential future developable areas.
Panagar	• Strategic location of the town as connected major national highway & near to Jabalpur city. • Famous for weekly market catering to nearby rural areas agricultural commodities. • Major household industry is *bidi*, bricks and bamboo manufacturing. • High percentage of literate population. • Extremely low poor (slum) population	• High percentage of non – workers • There are no hospitals in the town. • Lack of safe drinking water supply and coverage. • Ground water and nearby aquifers are the major sources of water supply. • Problem of open drainage that poses major health and environmental hazard. • The municipality is mainly dependent upon octroi and grants through state and central government.	• Potential satellite town for Jabalpur city. • The weekly market can be strengthened and upgraded to a regional trading hub. • Taxes on sanitation and sewerage services can add to the municipal revenue.	• High population density but peripheral areas are developing which have a low population density. • Depletion of groundwater and natural sources are major environmental threats.
Shahpura	• An important town due to the location of Indian Oil station. • High percentage of literate population. • Extremely low poor (slum) population	• High percentage of non – workers • There are no hospitals in the town. • Lack of safe drinking water supply and coverage. • Ground water and nearby aquifers are the major sources of water supply.	• Ribbon – pattern of development occurring along state highway. • To develop Shahpura as a satellite town, near Jabalpur city. • Taxes on sanitation and sewerage services can add to the municipal revenue.	• Depletion of groundwater and natural sources are major environmental threats.

		• The municipality is mainly dependent upon octroi and grants through state and central government.		
Katangi	• An important agricultural and agro – based industries towns. Famous for peas and paddy cultivation. • Major household industry is *bidi* manufacturing. • Largest *mandi* town; serving as agricultural market town for nearby villages.	• Even though the town has strong agricultural based industries still there is a high percentage of non – workers. • Lack of safe drinking water supply and coverage • Problem of open drainage that poses major health and environmental hazard. • The municipality is mainly dependent upon octroi and grants through state and central government.	• Rich black soil belt with cotton cultivation which can be become a potential household industry of the town. • The hilly topography has many natural waterfalls and can be developed as tourism potential. • Hiran river which flows nearby town could be a potential source for drinking water supply. • Taxes on sanitation and sewerage services can add to the municipal revenue. • Infrastructure can be strengthened and upgraded to develop the towns as regional *mandi* town.	• Depletion of groundwater and natural sources are major environmental threats.
Patan	• It is the *tehsil* headquarter of Patan district. • Good coverage of educational and institutional facilities. • High percentage of literate population.	• High percentage of non – workers • Open defecation and open drainage are major health and environmental hazards. • The municipality is mainly dependent upon octroi and grants through state and central government.	• Potential counter- magnet town for Jabalpur city. • Infrastructure can be developed and strengthened the town as *tehsil* headquarter. • Taxes on sanitation and sewerage services can add to the municipal revenue.	• Nucleated settlement pattern with pockets of agricultural areas in – between them. These areas can be potential developable areas for residential and industrial purposes.
Majholi	• Second important town in Sihora *tehsil* • Major household industry is *bidi* manufacturing.	• Open defecation, unsafe drinking water, open and no drainage are the major health and environmental hazards. • High percentage of non – workers. • Low literacy levels. • The municipality is mainly dependent upon octroi and grants through state and central government.	• Historic temples are situated in this towns and can be developed as religious tourism places. • Jobs can be generated based on tourism • Taxes on tourism, sanitation and sewerage services can add to the municipal revenue	• Depletion of groundwater and natural sources are major environmental threats.

Barela	• Nearness to Jabalpur city is the only advantage.	• Poor tax revenue sources • Mainly dependent upon grants from state and central governments. • High percentage of non – workers. • There are no hospitals in the town.	• Strategic location near Jabalpur city and national highway crosses through the town. The highway connects important industrial and big cities. • Investment in high quality infrastructure can be done and the town can be developed as potential satellite town near Jabalpur city. • Taxes on sanitation and sewerage services can add to the municipal revenue	• Weak physical and social infrastructure bases.
Bhedaghat	• The town is famous for major tourist spot – Dhuandhar waterfall • Major household industry is related to marble products.	• Lack in social infrastructure • Poor tax revenue sources • High percentage of non – workers. • Open defecation, unsafe drinking water, open and no drainage	• Opportunities related to tourism industry employment such as hotels, small bazars, restaurants can be generated.	• Open defecation can pose a major environmental and health hazard.

Step 2: Vision and short – term areas of interventions for the development of towns

Based on the S.W.O.T analysis, the plan of actions is formulated based on the following sectors.

Vision statement	Priority areas	Short – term actions
"Transforming the towns of Jabalpur into vibrant urban and socioeconomic areas by promoting an inclusive and	*1. Promote sustainable social & economic development*	• Develop a *community facilities plan* for towns based on the usage of health, education and recreational amenities by the citizens of the towns and surrounding settlements. • Setting up advanced health facilities such as hospitals and multi – specialty health centers in towns. At present, among the eight towns, only Sihora has one hospital. • Develop a local economic feasibility plan based on the number of non – workers, workers, literacy, small and medium enterprises, jobs required, and the local skill sets of the people. • Promoting bidi manufacturing industry as economic growth driver by providing them incentives and job creation in the bidi industry and related services. • Develop a comprehensive tourism development plan covering the towns which have historic, religious and nature places of significance. • A robust and comprehensive assessment of town's urban local bodies revenue and expenditure is required to identify the fiscal gaps in revenue generation, collection and expenditure, to diversify tax and non – tax revenue sources, mobilizing both the revenue and capital expenditures.
	2. Promote the development of human assets and skills	• A brief profile of the workforce engaged in various occupations such as agriculture and allied activities, small and medium scale industries, services and tertiary sector should be prepared. • Focus on human asset management is required through training and skill development initiatives. • A brief profiling of the number of workers, staff and officials in the urban local bodies of the towns should be prepared. • A report on the household income and expenditure should be prepared

sustainable development".	*3. Promote efficient and equitable distribution of Infrastructure*	• A detailed physical survey of all the towns is required showing demand – supply gap of the water supply and sanitation services. • Develop a detailed water supply network plan ensuring 100% coverage of the households and augmenting treated sources of water supply. • Develop an underground sewerage network plan ensuring 100% coverage of the households. • Develop a comprehensive plan ensuring access to on – site sanitation facilities. • Jabalpur district has a good network of roads and national highways. The towns are mainly located nearby the national or state highways. Therefore, it is suggested that a mobility plan at the district level showing the road distribution, network and density along with existing transport infrastructure can be prepared.

Step 3: Policy directions for integrating towns into urban development framework

Ministry of Housing and Urban Affairs (Nodal Agency)

At present, the urban development policy discourse in India consists of various missions, programs and schemes covering major sectors such as water supply, sanitation, roads, urban aesthetics, housing, employment and livelihood.

Coverage	Major ongoing schemes & programs	Main growth drivers for both the urban areas	What is required to stimulate the development of towns?
Cities	• JNNURM (Jawaharlal Nehru National Urban Renewal Mission) • Smart Cities Mission • AMRUT (Atal Mission for Rejuvenation & Urban Transformation) • Swachch Bharat Mission (Clean India Mission) • HRIDAY (Heritage City Development and Augmentation Yojana) • Urban Transport • PMAY (Pradhan Mantri Awas Yojana – Housing scheme) • RAY (Rajiv Awas Yojana – Housing Scheme) • NULM (National Urban Livelihood Mission)	***High economic growth, high – class infrastructure and quality of living.***	**Gaps:** • Unbalance in the coverage of the schemes and programs. • At present, there is no single urban policy for India. • Strong focus on development of towns and strengthening rural – urban linkages is slowly emerging in the urban development policy and planning discourse in India. **What can be done (urban – side):** • A clear definition of urban areas to overcome the imbalance in India's urban structure. • The role of District Planning Committees should be clearly defined and strengthened as DPCs are vital regulatory and administrative bodies for small and medium town's development as well as rural development. • A guiding framework for the overall development of the towns rather than solely focusing on infrastructure. • Support the capacity of small and medium urban local bodies to identify their constraints and opportunities.
Cities and Towns	• The only scheme is UIDSSMT (Urban Infrastructure Development Scheme for Small and Medium Towns, which was covered under JNNURM)	***Minimal, supportive economic base for farm & non – farm activities. Social and economic linkages with both the cities and rural areas. An in – between area with low development.***	
Ministry of Rural Development is the nodal agency for the development, formulation and implementation of plans and schemes and management of the rural areas in India.			
Rural	• Gram Swaraj Abhiyan (Schemes for poor households) • DISHA (District Development Coordination and Monitoring Committee) • Swachch Gramin Mission (Clean India Mission for Rural Area)	***Agriculture is the main economy.***	**What can be done (rural – side):** • Rational spatial strategy wherein the "location advantage" of small and medium towns is defined such as seasonal employment centers, regional trading centers, cluster development units.

	• MGNREGA (Mahatma Gandhi National Rural Employment Gurantee Act) • PMAY (Pradhan Mantri Awas Yojana – Rural areas housing scheme) • NRLM (National Rural Livelihood Mission) • RURBAN (National RuRBAN Mission – Cluster area development approach)		• Selective migration from rural areas to towns / cities.

Source: The analysis as given in table has been compiled by the author based on the field interviews conducted in the Urban Local bodies of the towns in Jabalpur and at State Urban Development Department Madhya Pradesh in Bhopal. Other sources included are City Development Plan for the eight towns, Ministry of Housing and Urban Affairs (http://mohua.gov.in/) and Ministry of Rural Development (https://rural.nic.in/).

In this given list, there is not a single town (population between 5,000 and 99,999) covered by any of the program. The only initiative for the development of towns (which also included the cities) was under one scheme called as UIDSSMT (Urban Infrastructure Development Scheme for Small and Medium Towns). The UIDSSMT was one of the thrust areas of JNNURM (Jawaharlal Nehru National Renewal Mission) started in the year 2005 and a duration of seven years from 2005 – 2012. The main objective of UIDSSMT was to improve the infrastructural facilities of the towns, enhance the public – private partnership in infrastructural development and promote planned integrated development of towns and cities (UIDSSMT, 2009). The major outcomes of this scheme were that the towns will have a modern and transparent budgeting system and a widespread planning and governance framework. Still, the towns did not achieve the desired results and suffered from poor financing and administration (HPEC, 2011 & Khan, 2014). Another point which is significant from rural – urban linkages point of view is the number of programs and schemes ongoing for the rural areas. The focus of the rural programs, like urban schemes and programs, includes provision of employment, infrastructural facilities, clean and safe drinking water and sanitation services. It seems that there exists an unbalance in terms of coverage of schemes and programs between the urban and rural areas (table 35; Step - 3).

There are few implications which emerges from the present policy framework in India. Small and medium towns, which come under a constitutional status as given under the 74th Constitutional Amendment Act, remained ignored from the overall policy framework of the country. The present scenario on policy framework shows that two polarized areas have been created on the development discourse of the country. The first one is of urban India consisting only of big cities where large population, high economic growth rate and high – class infrastructure are the main growth drivers and the second one is on rural areas where agriculture is the mainstay economy. The number of towns distributed across the various states in India has increased during the past decade 2001-11. So, it is important to understand the significance of

managing and developing the towns in the urban scenario of India. Rather than only pondering upon the state authorities and central government's grants and contributions sufficing the development of towns.

4.5 Conclusion: Way Forward

The purpose of this study was to rank the towns based on urban development index and identifying the weaknesses and strengths to stimulate urban development in the towns. The ranking and SWOT analysis exercises revealed that lack of social development, lack of economic strengthening and poor access to physical infrastructure are the major challenges present in the towns. Despite this fact, there are underlying opportunities which can become additional strengths such as, an upgraded infrastructure for weekly markets, regional trading centers, tourism and expansion of tax revenue sources, for the towns. From this study, the opportunities, vision, priority areas and short-term action plans for the towns can be taken as a general direction towards the formulation of urban policy at the state level of Madhya Pradesh and at the national level. At present there is no comprehensive urban policy for the states and for the country of India. Since the independence of the country, the Government of India has proactively taken several initiatives (as mentioned in table 35) for managing urban development (Ahluwalia, 2017). This study has important theoretical value in terms of rural – urban linkages in the urban policy discourse of India. Empirically, this study provides critical perspectives on the importance of infrastructure and an integrated urban-regional policy framework for the development of towns.

Investment in infrastructure can support the local functions and local tax bases which can remove the hurdle of small towns for having nothing to offer, shifting to a positive approach of looking for a planned future ahead (Gordon, 2017). The major weakness of the towns is that they are unable to deal with their poor taxes and debts. Still, it is postulated that the towns can build upon their social and human assets. This can be done by improving their social institutions such as schools and hospitals, high level of peoples' participation in town – level improvements and encouraging entrepreneurship through local skill sets of the people. Consequently, the towns can

accrue higher costs from welfare payments (Detter and Fölster (eds.), 2017). The municipal finances of smaller urban local bodies can be mobilized by taking an account of physical infrastructure, such as roads, water, waste water systems and solid waste management, to maximize higher revenues through user charges and fees. Moreover, analyzing the infrastructure investment gap is also important for future requirement to support the population growth (ADB, 2017 and UNESCAP, 2018). It can be implied from this infrastructure perspective that towns generally are unable to discharge their fundamental duties unless they address the issue of fiscal management (Mohanty, 2016).

In the rural – urban linkages, towns can be perceived as zones of convergence where both the cities and rural areas should support and boost the local economy of towns. This mutual interaction between the urban and rural areas can thereby reduce the primacy of large urban centers and strengthen the rural – urban linkages (Singru, 2015). This approach basically calls for a comprehensive urban–regional policy framework in which the interactions between cities, peri-urban areas, towns and rural areas are prominent and should be economically, socially and institutionally integrated (Shen, 2014). We have seen the number of schemes and programs ongoing for the cities and rural areas in India. In these programs the focus is mainly on infrastructure development and what is missing is overcoming the wide gap of developing the towns in between the urban and rural areas (Batra, 2012).

To conclude and as a way forward, the Government of India is now in the process of formulating the national urban policy. The proposed policy is based on ten “urban *sutras* (principles)” comprising of; cooperative federalism, agglomeration economies, harnessing rural-urban continuum, inclusive growth, sustainability, empowering local-level institutions, housing and urban infrastructure, urban finance, social justice including gender equity, and a robust urban information system (ORF, 2018). Moreover, the proposed policy is supposedly aligned with United Nation’s SDG 11 to “make cities and human settlements inclusive, safe, resilient and sustainable” (ORF, 2018). This policy is indeed a remarkable step to meet urbanization

challenges in India. However, at the same time the policy should first evaluate the imperatives, failures and challenges of the past urban initiatives and second apart from large cities, a roadmap for meeting the challenges and opportunistic development of towns should be included.

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4.7 Annexures

Urban development

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAGR town pop, 2001 - 2011	8	1.02	13.72	2.8438	4.40015
Town population as a % of district urban population	8	.46	3.05	1.3387	.81901
Urban pop density - Urban population per sq km	8	413	2327	1585.00	630.914
Change in urban area, 2001 - 2011	8	.00	13.75	1.9363	4.81215
% of the urban poor to the total urban population	8	.09	1.59	.4163	.50998
% of slum households to total urban households	8	.10	1.81	.4575	.58385
Valid N (listwise)	8				

Correlations

		CAGR town pop, 2001 - 2011	Town population as a % of district urban population	Urban pop density - Urban population per sq km	Change in urban area, 2001 - 2011	% of the urban poor to the total urban population	% of slum households to total urban households
CAGR town pop, 2001 - 2011	Pearson Correlation	1	-.428	-.745*	.988**	-.180	-.176
	Sig. (2-tailed)		.290	.034	.000	.670	.677
	N	8	8	8	8	8	8
Town population as a % of district urban population	Pearson Correlation	-.428	1	.542	-.396	.915**	.915**
	Sig. (2-tailed)	.290		.165	.331	.001	.001
	N	8	8	8	8	8	8
Urban pop density - Urban population per sq km	Pearson Correlation	-.745*	.542	1	-.698	.279	.287
	Sig. (2-tailed)	.034	.165		.054	.504	.491
	N	8	8	8	8	8	8
Change in urban area, 2001 - 2011	Pearson Correlation	.988**	-.396	-.698	1	-.173	-.172
	Sig. (2-tailed)	.000	.331	.054		.681	.684
	N	8	8	8	8	8	8
% of the urban poor to the total urban population	Pearson Correlation	-.180	.915**	.279	-.173	1	1.000**
	Sig. (2-tailed)	.670	.001	.504	.681		.000
	N	8	8	8	8	8	8
% of slum households to total urban households	Pearson Correlation	-.176	.915**	.287	-.172	1.000**	1
	Sig. (2-tailed)	.677	.001	.491	.684	.000	
	N	8	8	8	8	8	8

Economic development

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Urban work force as a % total urban population	8	.19	1.13	.4975	.30387
Main workers as a % total urban work force	8	.43	2.44	1.0850	.65638
Urban female work force as a % total urban workforce	8	.15	.82	.3624	.23824
Non – workers as a % total urban work force	8	.72	5.26	2.2200	1.42932
Percentage share of Taxes	8	12.08	38.91	23.7250	8.63324
Percentage share of Non - taxes	8	.32	11.72	5.4413	4.01948
Percentage share of grants	8	9.45	76.09	43.3700	20.70690
Percentage share of fianance commission transfers	8	1.69	12.97	7.4725	3.49118
Percentage share of other sources	8	1.36	58.25	19.9900	21.13661
Percentage shar of revenue expenditure	8	8.26	25.15	13.6013	6.21003
Percentage share of capital expenditure	8	52.68	91.60	81.5163	13.02561
Valid N (listwise)	8				

Correlations

		Urban work force as a % total urban population	Main workers as a % total urban work force	Urban female work force as a % total urban workforce	Non – workers as a % total urban work force	Percentage share of Taxes	Percentage share of Non - taxes	Percentage share of grants	Percentage share of fianance commission transfers	Percentage share of other sources	Percentage shar of revenue expenditure	Percentage share of capital expenditure
Urban work force as a % total urban population	Pearson Correlation	1	.991**	.959**	.981**	.188	.236	-.110	.252	-.055	-.458	-.673
	Sig. (2-tailed)		.000	.000	.000	.656	.574	.796	.548	.896	.254	.067
	N	8	8	8	8	8	8	8	8	8	8	8
Main workers as a % total urban work force	Pearson Correlation	.991**	1	.925**	.990**	.146	.177	-.155	.187	.028	-.517	-.638
	Sig. (2-tailed)	.000		.001	.000	.730	.674	.714	.657	.948	.190	.089
	N	8	8	8	8	8	8	8	8	8	8	8

Urban female work force as a % total urban workforce	Pearson Correlation	.959**	.925**	1	.886**	.236	.239	-.038	.268	-.149	-.345	-.662
	Sig. (2-tailed)	.000	.001		.003	.574	.568	.928	.521	.725	.402	.074
	N	8	8	8	8	8	8	8	8	8	8	8
Non – workers as a % total urban work force	Pearson Correlation	.981**	.990**	.886**	1	.177	.236	-.153	.243	-.007	-.521	-.663
	Sig. (2-tailed)	.000	.000	.003		.674	.574	.717	.561	.986	.185	.073
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of Taxes	Pearson Correlation	.188	.146	.236	.177	1	.829*	-.341	.549	-.323	.267	-.436
	Sig. (2-tailed)	.656	.730	.574	.674		.011	.409	.159	.435	.523	.280
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of Non - taxes	Pearson Correlation	.236	.177	.239	.236	.829*	1	-.379	.442	-.230	.530	-.669
	Sig. (2-tailed)	.574	.674	.568	.574	.011		.354	.272	.583	.176	.069
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of grants	Pearson Correlation	-.110	-.155	-.038	-.153	-.341	-.379	1	-.021	-.765*	-.283	.055
	Sig. (2-tailed)	.796	.714	.928	.717	.409	.354		.960	.027	.496	.898
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of fianance commission transfers	Pearson Correlation	.252	.187	.268	.243	.549	.442	-.021	1	-.453	-.143	-.136
	Sig. (2-tailed)	.548	.657	.521	.561	.159	.272	.960		.260	.735	.748
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of other sources	Pearson Correlation	-.055	.028	-.149	-.007	-.323	-.230	-.765*	-.453	1	.091	.274
	Sig. (2-tailed)	.896	.948	.725	.986	.435	.583	.027	.260		.830	.511
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage shar of revenue expenditure	Pearson Correlation	-.458	-.517	-.345	-.521	.267	.530	-.283	-.143	.091	1	-.108
	Sig. (2-tailed)	.254	.190	.402	.185	.523	.176	.496	.735	.830		.799
	N	8	8	8	8	8	8	8	8	8	8	8
Percentage share of capital expenditure	Pearson Correlation	-.673	-.638	-.662	-.663	-.436	-.669	.055	-.136	.274	-.108	1
	Sig. (2-tailed)	.067	.089	.074	.073	.280	.069	.898	.748	.511	.799	
	N	8	8	8	8	8	8	8	8	8	8	8

3. Physical infrastructure

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
% of urban households with access to treated tap water	8	21.44	66.57	48.3400	17.26064
% of urban households with access to electricity	8	82.01	97.27	90.2088	5.92314
% of urban households with latrines connected to piped sewer within premises	8	.39	4.07	1.8037	1.07955
% of urban households with latrines connected to septic tanks	8	26.70	62.71	48.6263	12.39826
% of urban households with wastewater connected to closed drainage system	8	2.09	17.30	10.2575	5.14075
% of urban households with open drainage	8	41.95	78.65	64.3525	12.34899
% of urban households with no drainage	8	6.47	55.96	25.3913	14.70657
Total length of metalled roads	8	10.90	38.70	18.6750	8.96848
Total length of unmetalled roads	8	1.50	72.00	14.9125	23.58028
% of urban households having cars / scooters / bicycles	8	55.28	89.86	72.4975	11.89750
Valid N (listwise)	8				

Correlations

		% of urban households with access to treated tap water	% of urban households with access to electricity	% of urban households with latrines connected to piped sewer within premises	% of urban households with latrines connected to septic tanks	% of urban households with wastewater connected to closed drainage system	% of urban households with open drainage	% of urban households with no drainage	Total length of metalled roads	Total length of unmetalled roads	% of urban households having cars / scooters / bicycles
% of urban households with access to treated tap water	Pearson Correlation	1	.068	.473	.779*	.813*	.494	-.699	.195	.340	-.104
	Sig. (2-tailed)		.872	.236	.023	.014	.213	.054	.643	.409	.806
	N	8	8	8	8	8	8	8	8	8	8
% of urban households with access to electricity	Pearson Correlation	.068	1	.515	.243	.380	.437	-.500	-.615	.321	.352
	Sig. (2-tailed)	.872		.191	.562	.353	.279	.207	.105	.439	.392
	N	8	8	8	8	8	8	8	8	8	8
% of urban households with latrines connected to piped	Pearson Correlation	.473	.515	1	.704	.851**	.021	-.315	-.182	.112	.251
	Sig. (2-tailed)	.236	.191		.051	.007	.960	.447	.667	.791	.550

sewer within premises	N	8	8	8	8	8	8	8	8	8	8
% of urban households with latrines connected to septic tanks	Pearson Correlation	.779*	.243	.704	1	.913**	.348	-.611	-.210	.086	-.221
	Sig. (2-tailed)	.023	.562	.051		.002	.399	.107	.617	.840	.599
	N	8	8	8	8	8	8	8	8	8	8
% of urban households with wastewater connected to closed drainage system	Pearson Correlation	.813*	.380	.851**	.913**	1	.295	-.597	-.175	.347	.054
	Sig. (2-tailed)	.014	.353	.007	.002		.479	.118	.678	.400	.899
	N	8	8	8	8	8	8	8	8	8	8
% of urban households with open drainage	Pearson Correlation	.494	.437	.021	.348	.295	1	-.943**	-.063	.380	-.280
	Sig. (2-tailed)	.213	.279	.960	.399	.479		.000	.883	.353	.502
	N	8	8	8	8	8	8	8	8	8	8
% of urban households with no drainage	Pearson Correlation	-.699	-.500	-.315	-.611	-.597	-.943**	1	.114	-.441	.216
	Sig. (2-tailed)	.054	.207	.447	.107	.118	.000		.788	.275	.607
	N	8	8	8	8	8	8	8	8	8	8
Total length of metalled roads	Pearson Correlation	.195	-.615	-.182	-.210	-.175	-.063	.114	1	-.102	-.323
	Sig. (2-tailed)	.643	.105	.667	.617	.678	.883	.788		.810	.435
	N	8	8	8	8	8	8	8	8	8	8
Total length of unmetalled roads	Pearson Correlation	.340	.321	.112	.086	.347	.380	-.441	-.102	1	.095
	Sig. (2-tailed)	.409	.439	.791	.840	.400	.353	.275	.810		.823
	N	8	8	8	8	8	8	8	8	8	8
% of urban households having cars / scooters / bicycles	Pearson Correlation	-.104	.352	.251	-.221	.054	-.280	.216	-.323	.095	1
	Sig. (2-tailed)	.806	.392	.550	.599	.899	.502	.607	.435	.823	
	N	8	8	8	8	8	8	8	8	8	8

4. Human assets

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
% of urban literates to total urban population	8	.30	2.23	.9450	.60858
% of urban male literates population	8	37.99	42.14	40.1700	1.50930
% of urban female literates population	8	27.47	34.60	31.4013	2.35558
CAGR of urban female literates, 2001-11	8	2.12	14.80	4.3563	4.24560
CAGR of urban literate, 2001-11	8	1.89	14.45	3.7288	4.33617
Valid N (listwise)	8				

Correlations

		% of urban literates to total urban population	% of urban male literates population	% of urban female literates population	CAGR of urban female literates, 2001-11	CAGR of urban literate, 2001-11
% of urban literates to total urban population	Pearson Correlation	1	.242	.343	-.438	-.420
	Sig. (2-tailed)		.564	.405	.278	.300
	N	8	8	8	8	8
% of urban male literates population	Pearson Correlation	.242	1	.835**	-.402	-.348
	Sig. (2-tailed)	.564		.010	.323	.398
	N	8	8	8	8	8
% of urban female literates population	Pearson Correlation	.343	.835**	1	-.726*	-.685
	Sig. (2-tailed)	.405	.010		.041	.061
	N	8	8	8	8	8
CAGR of urban female literates, 2001-11	Pearson Correlation	-.438	-.402	-.726*	1	.997**
	Sig. (2-tailed)	.278	.323	.041		.000
	N	8	8	8	8	8
CAGR of urban literate, 2001-11	Pearson Correlation	-.420	-.348	-.685	.997**	1
	Sig. (2-tailed)	.300	.398	.061	.000	
	N	8	8	8	8	8

5. Social infrastructure

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Hospitals (numbers)	8	0	1	.13	.354
Health centers (numbers)	8	0	28	16.00	11.377
Schools (numbers)	8	10	65	32.00	15.866
Colleges & Universities (numbers)	8	0	5	2.38	2.066
Other Institutes (numbers)	8	0	3	.38	1.061
Orphanage Homes (numbers)	8	0	0	.00	.000
Working Women's Hostel (numbers)	8	0	0	.00	.000
Old Age Home (numbers)	8	0	0	.00	.000
Recreational facilities (numbers)	8	0	9	3.37	3.662
Banks (numbers)	8	1	11	6.00	2.928
Valid N (listwise)	8				

Correlations

		Hospitals (numbers)	Health centers (numbers)	Schools (numbers)	Colleges & Universities (numbers)	Recreational facilities (numbers)	Banks (numbers)
Hospitals (numbers)	Pearson Correlation	1	.426	.840**	.318	.400	.276
	Sig. (2-tailed)		.292	.009	.443	.326	.508
	N	8	8	8	8	8	8
Health centers (numbers)	Pearson Correlation	.426	1	.635	.018	.175	.622
	Sig. (2-tailed)	.292		.091	.966	.679	.100
	N	8	8	8	8	8	8
Schools (numbers)	Pearson Correlation	.840**	.635	1	.584	.502	.455
	Sig. (2-tailed)	.009	.091		.128	.205	.257
	N	8	8	8	8	8	8
Colleges & Universities (numbers)	Pearson Correlation	.318	.018	.584	1	.507	.236
	Sig. (2-tailed)	.443	.966	.128		.199	.573
	N	8	8	8	8	8	8
Recreational facilities (numbers)	Pearson Correlation	.400	.175	.502	.507	1	.227
	Sig. (2-tailed)	.326	.679	.205	.199		.590
	N	8	8	8	8	8	8
Banks (numbers)	Pearson Correlation	.276	.622	.455	.236	.227	1
	Sig. (2-tailed)	.508	.100	.257	.573	.590	
	N	8	8	8	8	8	8

CHAPTER V

CONCLUSION, RECOMMENDATIONS AND FUTURE RESEARCH DIRECTIONS

5.1 Overview of the Research

The aim of this study is to present an analysis of the demographic, socioeconomic and structural components of small and medium towns to highlight their significance in urban settlements and integration into the urban policy framework. The basic argument in the study is that smaller sized urban settlements which will accommodate majority of the population in next fifteen years are facing the challenges such as basic urban services and policies gridlock and unable to meet the growing demands of the urban dwellers. In this regard, this study attempts to explore the spatial, social, economic and organizational factors of smaller towns for their sustainable and inclusive development in the urban settlements. This chapter briefly summarizes the results of the study, presents a framework for the development of towns, highlights the limitations of the study and provide directions for future research.

5.2 Summary of the Findings

This dissertation discreetly fulfills the purpose of presenting an exploratory analysis of the demographic, socioeconomic and structural components of small and medium towns. The objectives of the study deliver an in-depth analysis of the settlement pattern, employment structure and pattern, urban functions, role of urban local bodies, state of municipal finances in towns and the challenges and opportunities that exists in towns for their development. It can be inferred that although, towns have an administrative status are divergent from the usual urban governance, planning and management framework of India.

The first chapter of this study provides a general background to the focus, characteristics and importance of small and medium towns in urban studies literature by various scholars, in

addition to the aim, objectives and significance of the study. The brief overview highlighted that traditionally small and medium towns have played the role of a market towns, administrative towns, agricultural towns for the rural settlements and to achieve a balanced urban and rural development. In the first chapter, it is outlined that the previous research on small and medium towns has addressed specific issues such as income inequality, housing, tourism, cultural regeneration, small neighborhoods and communities. Still, the overall approach of these studies remained fragmented and did not coalesced into a critical work to highlight the importance of towns in the urban studies research. To investigate thoroughly into the problem of small and medium towns, the main research questions of this study are shown in this chapter; (i) How does the spatial development planning and strategies support integrating small and medium towns into economic and spatial planning framework? (ii) Why planning, governance and finance matters for the development of small and medium towns and how they are interlinked and mutually reinforcing the urban local bodies of small and medium towns? (iii) What are the peculiarities that small and medium towns hold and how they can be intervened into the overall urban development strategies? In the end of first chapter broader implications of the study are given in three ways. First, in terms of interdisciplinary research. This study expands on ongoing studies in India related to the urbanization and its related issues such as economic growth, migration, urban policies, smart cities, regional development and income distribution. Second, in terms of contribution towards re-examining the definition of urban areas given by the Census of India. Lastly, by determining attributes for better management and development of the towns, especially in line with the global interests on New Urban Agenda of UN-HABITAT.

In Chapter 2, the first part of the analysis on the significance of towns in the settlement system is given. This analysis mainly includes demographic and socioeconomic assessment of towns. It is mentioned in this chapter that the main assumptions of the theories of urban and regional development such as, central place theory, growth pole theory, core-periphery model and least cost locational theory, were related mainly to the accelerated urban and economic

growth at certain urban growth points and reflected an urban bias towards development planning. Therefore, the concept of rural-urban linkages gained attention to overcome the urban and regional disparity. In this regard, various scholars focused upon bottom-up planning approaches by way of strengthening the small and medium towns through agropolitan development and rurban clusters.

However, in an urban settlement hierarchy, the position and role of settlements in regional and national spatial transformation is vital. In this regard, two strands of central-place and rank size theories viz. the size and catchment area of a settlement for its goods and services and the city-size distribution are important which has implications for the role of small and medium towns. As a country's economy moves from a subsistence to industrial economy there are general disparities that occur across various settlement sizes ranging from villages to towns, cities, urban agglomerations and city-regions. As a rule of central place theory, small and medium towns which comes under the higher order settlements and are those places in the spatial organization which attains a minimum basic urban functions, goods and services that minimizes the movement of population from the surrounding settlements and within towns. If we examine the city-size distribution, settlements generally do not follow a normal distribution of settlements. In actual form, the social and economic variables of a geographic space are liable for the development and transformation of a settlement.

Based on the above argument of the importance of towns in urban settlement hierarchy, three important inferences are drawn from Chapter 2. Firstly, the assessment of urban primacy at the state level of Madhya Pradesh showed that there is no primate city at the state level in Madhya Pradesh. In the top four cities of Madhya Pradesh, Indore city remained at the first position past six decades (1951 – 2011) and there has been a persistent change in the ranking and relative dominance of the second, third and fourth largest cities i.e. Bhopal, Gwalior and Jabalpur during the same period. Secondly, the rank -size distribution in Jabalpur district showed that there is a strong correlation between the rank and population of the towns. An important

implication of the rank – size distribution is the economic importance of towns. As the coefficient in the rank-size distribution declines it indicates that the forces of diversification became prominent producing large number of lower order settlements. The diversification forces in the case of smaller settlements implies that in the lower order settlements primary and secondary economic activities are dominant. The evidences based on the occupational pattern shows that the percentage of workers engaged in primary and secondary economic activities have increased since past two decades in the towns of Jabalpur district. Lastly, the centrality index based on the level of the functions present and the area served by the towns indicated that the provision of urban functions by large, medium and small urban settlements of Jabalpur district fits appropriately especially into the element of urban centers in the CPT (Central Place Theory). The spatial characteristics of these urban centers relate to the areas and population served by the service centers and their functional hierarchies. For example, the centrality index based on the presence of urban functions showed that Jabalpur municipal corporation had the highest index (1668.11) while, Sihora (90040.44), Panagar (58668.11), Patan (52964.38), Kundam (4377.36), Majholi (51700.66), Shahpura (87781.70), Katangi (17298.26) and Barela (4162.99) the centrality index based on population served was high due to the access to functions by the population of their surrounding villages.

In Chapter 3, the analysis on the impact of decentralized urban reforms in development of small and medium towns is presented. The main findings from this chapter shows that the decentralized mandate of India, 74th Constitutional Amendment Act, has not been able to fulfill the gaps to fully devolve the financial resources, functions and functionaries to the urban local bodies of the towns. The municipalities and nagar panchayats are mainly embodied as buildings with mayors, elected officials and administrative structure however, the regular services and working of these official is less evident in practice. The municipalities and nagar panchayats are facing political, institutional, technical and economic challenges. Lack of technical capacities of the staff has led to poor organizational set up and improper administration. The issues on local

participation and financial management are related to the political interference, lack of people's participation and weak financial basis. Absenteeism among the elected members (such as mayors, councilors, and other staff) mostly hampers the regular functioning of the municipal offices which further causes delays in the activities of the urban local bodies. Due to the interference of the political parties in the decision-making process, the appointed authorities often work under pressure leading to frequent transfers of the employees. Grants and transfers from the central and state governments are the major funding sources for the urban local bodies. Paradoxically, the financial devolution or greater fiscal autonomy to the municipalities and nagar panchayats has fallen and stagnated. It is only the property tax and octroi levies which brings maximum share of revenues to the municipalities and nagar panchayats. Decentralization has not carved out any space for urban development of the towns but has only complicated the institutional structures in the municipalities and nagar panchayats. The urban local bodies of small and medium towns are dually governed by a few political parties and Mayors. The parastatal agencies are traditionally doing their duties with little attention being given to poor conditions of the urban infrastructure in the towns.

Chapter 4 shows the final analysis on unlocking the potential of small and medium towns to stimulate urban development. This chapter basically included a snapshot of the opportunities and challenges of the towns. The assessment is done by ranking towns based on the levels of urban development. The assessment on urban development has been carried out based on an urban development index which was developed by selecting thirty – eight indicators which are further disaggregated and grouped under five dimensions namely, urban growth, economic development, physical infrastructure, human assets and social infrastructure. The study highlights that socioeconomic and infrastructure development are the cornerstones for the development of towns. Based on levels of urban development, this study identified the opportunities existing in the towns and prioritized them as short – term action plans for the development towns. At present, India does not have an urban policy either at the state level or at the national level. The

urban initiative taken so far in India are mainly large cities bias and have a strong focus on the infrastructure development. Therefore, this study is an attempt to provide a general direction for the integration and development of towns in the present urban development discourse of India.

5.3 Framework for Development of Towns in India

The overall results of this study are more likely in consensus with the broad objective of the New Urban Agenda of the United Nations Habitat – III strengthening the capacity of rural service centers and smaller and secondary towns to attract population and promote decentralized growth. As mentioned by the United Nations that by the year 2030, more than fifty percent of the world's urban population will be living in small sized urban centers as compared to the large cities and urban agglomerations. With the bulk of population predicted to go towards smaller towns, it is vital to identify the distinctiveness of smaller towns in comparison to large cities and rural areas, may be particularly important for an inclusive urban development (Christiaensen and Kanbu, 2017). It is known from the results of this study that there is a wide gap in the urban and rural areas development framework. The Census of India's arbitrary criteria of converting the rural areas into census towns and then identifying them as statutory urban local body has been stringent since 1961 (ORF, 2018). Obviously, there is a need to revise the definition of identifying the urban areas in India.

But, then, what could be done in making towns better urban areas for living for the growing population and ensuring that the conversion of rural areas to urban areas meets a decent quality of life? Finding a solution to this question can be far-reaching. As a future recommendation a prospective town development framework has been proposed in the conclusion chapter of this study. This framework provides an overview of what can be done in making towns a future urban area by way of taking a multi-level planning approach and key features for development. The prospective town development framework has been shown in table 36 below.

Table 36. A Framework for Prospective Town Development in India

<table>
<tr><th colspan="3">I. Planning interventions</th><th colspan="3">II. Town development factors</th></tr>
<tr><td colspan="3">Present scenario in India's planning</td><td colspan="3">Short-term interventions for town development</td></tr>
<tr><td>Planning focus</td><td>Multi-level planning</td><td>Areas</td><td>Settlement hierarchy</td><td>Development of towns</td><td>Approach</td></tr>
<tr><td>Policies & finances</td><td>National level</td><td rowspan="2">Urban & rural</td><td rowspan="2">Metropolitan region</td><td rowspan="2">Focus on governance and administration of towns</td><td rowspan="2">Inclusive urban development (city, towns, census towns)</td></tr>
<tr><td>Sectoral-focused</td><td>State level</td></tr>
<tr><td rowspan="4">Regional</td><td>District level: &</td><td rowspan="4">- Cities

- Towns

- Sub-districts</td><td>Urban agglomeration</td><td>Focus on physical & social infrastructure of towns</td><td>Coordination, inter-sectoral (urban & rural)</td></tr>
<tr><td>Metropolitan planning committee</td><td>Cities</td><td rowspan="3">Major urban & regional development strategies:
- Resource based
- Basic needs oriented
- Employment intensive
- Rural development centered</td><td rowspan="3">Integrative approach: Rural development linked to physical linkages, economic linkages, population movement, service-delivery, political, administrative and organisation set-up.</td></tr>
<tr><td>District planning committee</td><td>Medium towns</td></tr>
<tr><td>Local & area based</td><td>Block level area planning</td><td>Small towns</td></tr>
<tr><td>Grassroots planning</td><td>Village planning</td><td>Villages</td><td>Villages</td></tr>
</table>

	Overlapping areas - Planning
	Overlapping areas – Town Development

Source: Conceptualized by the author based on the findings of the study

In the above table, the framework for the development of towns is divided into two main parts viz. the planning interventions and factors responsible for the development of towns. In the first part, the planning scenario in India at present consists of five stages of multi-level planning. At the center, the Planning Commission (Niti Ayog) prepares the plans and coordinates with the states governments for the implementation of the plans such as, five-year plans, annual plans and perspective. At the state level, planning functions are mainly related to socio-economic development in both urban and rural areas such as, agriculture, primary education, primary health, roads, cooperation, social welfare, and village panchayat (Ali & Rahman,2018). At the district-level, there are metropolitan planning committees (for urban areas) and district planning committees (for rural areas) which looks in details regarding the administrative, technical expertise and data and information to execute the programs and policies. The district-level planning is also closely linked to the block-level and village planning to involve people's

participation and planning to reach at the grass-roots level (Ali & Rahman, 2018). It can be proposed from the existing multi-level planning framework that village planning, block-area planning and district planning committee can be identified as major interventions areas for development of towns. It is among these planning units, towns are transitional areas from rural to urban. Therefore, the towns can be treated as macro-units or command area units for planning.

In part two, the settlement hierarchy from villages to metropolitan regions is shown. This section mainly highlights the factors responsible for the development of towns at all hierarchical levels in a settlement system. In this part, there are a few growth factors for the development of towns mentioned to fulfill their role in maintaining a spatial balance in the settlement hierarchy, improving urban amenities, building inclusive institutions and generating a network of small and medium towns for an inclusive urban development. The main conditions to achieve the development of towns are; (i) rural development dimension, to tackle the issues on rural side such as, rural poverty, land rights, agricultural development, land use changes, social values, economic equity, greater decision-making and rural to urban migration (Whitby & Willis, 2017) (ii) employment intensive, whenever there is a new economic opportunity the perspective from size, market, capital and labor from towns should be considered, (iii) basic needs oriented, an overall social, cultural, political development and (iv) resource based regional knowledge network through physical linkages, economic linkages, population movement, service-delivery, political, administrative and organization set-up. Therefore, towns, peri-urban areas and new towns are the main areas which gets affected by this transition and requires a detailed assessment based on the resources present, the basic needs of the population in these areas and should be secondary and tertiary sector employment intensive.

5.4 Overall Significance of Research

This study contributes to the benefits of ongoing programs and missions in the urban as well as rural sector in India considering that towns play an important role in urban development today. The growth of population in towns validates the need for effective urban planning,

management and programmatic approaches. The recommended short – term action plans as given in chapter 4 of this study and the multi-level planning framework will be able to guide the development of the towns better. Besides, this study could also guide the administrators on what should be emphasized in the development plans to improve the social and economic basis of the towns. For the researchers, this study could help uncover critical areas in urbanization, economic development and growth which has gained momentum in the Indian scenario in last few years. At present, there is insufficient focus on the challenges of towns, because they are not recognized as an integral part of the functional activities that should drive the growth of these urban areas (Maheshwari et.al, 2016). Thus, to implement the agenda of sustainable development, planning and management of urban areas, analyzing and visualizing different options with a range of interests involved is important to arrive at a new theory and research agenda for the development of towns (Godschalk, 2004).

5.5 Directions for Future Research

This study proves that towns are integral part in a settlement system. Scaling up the strategy of towns in urban development it is required that we should understand that towns are demographically, socially and economically vibrant urban areas of the countryside. In the case of developing, especially by taking the case of this dissertation, undoubtedly towns remained ignored from the process of urbanization mainly due to their ignorance from the urban policy discourse and weak governance. This study can be taken as a reference to explore the issues of towns in developed countries as well. In the case of developed countries such as United States of America and Europe, small and medium towns are recognized as new urbanism places. These towns are recognized based on certain characteristics such as belonging to a culture, sense of community, interactive neighborhoods, simple lifestyle as opposed to the forces of attraction by cities (employment, emerging real estates, industrial parks and urban sprawl). It would be interesting to study the development of towns as a remedy or solution between that of expanding city and rural areas to serve as dynamic urban cores. It might be useful to apply a detailed

ethnographic approach for better understanding of economic scenario at the households' level such as income and expenditure pattern of the households, education levels in the households, type of occupation and monthly income, prospective town development plans exploring the changes in a settlement moving up from rural towards urban can be studied. Lastly, a detailed cost-benefit analysis on the municipal assets of towns will give better understanding about the financial gaps existing in local bodies of towns. In this study, I presented an array of issues associated with the social and economic development of towns. Nevertheless, an impetus for subsequent rigorous, social scientific investigation into the emerging towns and their relevant issues is required.

5.6 References

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